HEALTH PROMOTION:

A Planning Guide

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CHAPTER 1 - RATIONALE AND OVERVIEW

Introduction

In March 1982, the Project Board of the District Health Councils Research Program endorsed a proposal from its Task Force on Health Promotion for the development of a planning guide. The members of the Task Force, agumented by a project assistant and a representative from the Board, spent the ensuing ten months preparing Health Promotion: A Planning Guide, which now appears in its first edition.

The Guide has been written for the membership of District Health Council committees which are responsible for health promotion. These committees are anticipated to include members with a broad range of backgrounds, from both the lay public and the providers of health services, and with varied levels of experience and training in the delivery of health services, research methods, and planning procedures.

The Task Force has anticipated that the members of these committees will have noted that health promotion services are somewhat less developed than other parts of the health care system which provide treatment, rehabilitation, and chronic care services. As a consequence, there is less agreement about what health promotion is (and is not), to whom it is extended, and which strategies can be employed to achieve its ends. In this light, it is not surprising to find that planning models for health promotion services are relatively scarce and, when they are developed, tend to be relatively unsophisticated.

The Guide is intended to address these circumstances. It is essentially a framework within which the committees which are responsible for health promotion can operate. Through it, the Task Force has endeavoured to integrate the fundamental concepts of health promotion and to match them to accepted planning and operating procedures. The Guide is intended as a resource for committee members. It adopts their perspective on both the community at large (its demands and supports), and the approach to planning. In addition, it endeavours to draw from the experience and knowledge of others in the field, so that present day planners can avoid errors and capitalize on successes as much as possible.

The members of the Task Force will acknowledge from the start that the Guide is not the final statement on planning in health promotion. Rather, it endeavours to present a sensible integration of the knowledge and experiences that have been recorded to date. As the base of knowledge expands and as experiences are accumulated, the Guide will be revised accordingly. Nevertheless, in its current form it provides a solid base from which planning committees can address their responsibilities in health promotion.

The Justification for Health Council Involvement in Health Promotion

In light of the relative lack of development of health promotion theory and planning, it is tempting for District Health Councils to shy away from involvement in the field. This tendency is not supported by the Minister of Health, however, who has described his position as follows:

> "... it has been a stated policy objective of the Ministry of Health that we want to shift the health care system from an institutional-based, disease-oriented, curative one to a community-based, prevention and health promotion-oriented one (Grossman, 1982)."

It is noteworthy that, in the same address, the Minister concedes that he is unsure of how to accomplish this policy objective. Thus, he establishes what should be done, but not how it should be done.

This circumstance has implications for the District Health Council which, at the local level has a mandate to plan a comprehensive health care program and to co-ordinate all health activities within its district. As part of this mandate, the Health Council is asked to identify health needs in its district, and to consider alternate methods of meeting those needs, consistent with Provincial guidelines. It is reasonable that health promotion should be included within the scope of a comprehensive health care program. In fact, the Minister's policy statement suggests that his preferred direction is to effect an overall shift in emphasis towards health promotion. As a consequence, it must be concluded that District Health Councils have the responsibility not only to plan for health promotion, but in the absence of Provincial guidelines, to demonstrate initiative with the formation of such plans and the processes by which they are developed.

The need for some form of District Health Council involvement is further emphasized by the fact that health promotion activities and services already exist in most communities. Most often, these are run by individual agencies or organizations, in both the public and private sectors, and with no overall co-ordination. Involving the people who provide these services in a planning process will establish them as part of a base from which the health promotion network can evolve. Again, such co-ordination clearly falls within the mandate of the District Health Council.

Finally, careful planning by the Health Council will increase the likelihood that health promotion services will evolve in a way which will maximize their positive impact. A properly developed plan will have a greater base of support from both the public at large and the network of health service providers.

In summary, there are four principal reasons why the District Health Council should be involved in the planning of health promotion:

1. to support the policy of the Ministry of Health to shift health services in a community-based, prevention and health promotion direction;
2. to fulfill the Health Council mandate for the development of a comprehensive health care program in its district;
3. to fulfill the Health Council mandate for the co-ordination of all health activities within its district; and
4. to maximize community support for health promotion services and their likelihood for favourable impact on health status.

Introduction to the Model for Planning and Related Activities

There are two principal ways in which the guide should be helpful to members of committees which are responsible for health promotion. First, it describes the planning process as a set of sequential functions, and describes how each might be performed. The second benefit is in the area of continuing operations of the committee which also are described as a set of separate but related functions. Again, suggestions are made concerning how each might best be achieved.

In all, there are seven planning and operating functions, as described below:

Function 1. Selecting a definition for health promotion;
Function 2. Assessing proposals from the community for the development or expansion of health promotion activities and services;
Function 3. Developing an inventory of existing health promotion services;

Function 4. Developing a data base which identifies local rates for preventable disease, disability, and premature death;

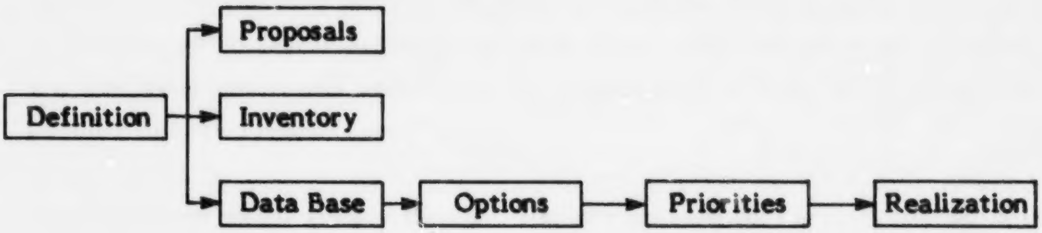
Function 5. Developing a list of options for programs by which the local rates for preventable disease, disability, and premature death can be addressed;

Function 6. Setting priorities among the options and incorporating them into a health promotion plan;

Function 7. Providing supportive services to effect the realization of the plan.

The set of planning functions and the set of related activities are, of course, closely interrelated. This is reflected in the organization of the guide - those functions which are prerequisites for others are set in sequence, while those which remain can be addressed simultaneously. Figure 1-1 illustrates these relationships.

Figure 1-1
Relationships Among Health Promotion Functions



There is, of course, no reason why an individual planning committee could not modify this sequence to better suit its purposes, or to add or delete functions according to its needs. The members of the Task Force have presented the seven functions as a general model that should match the preferences of many, but not all, District Health Councils.

Each function comprises a chapter in the Guide. In the following synopses, the highlights of each chapter are presented, and, where appropriate, its relationship to other chapters (or functions) is identified.

Definition

Chapter 2 begins with the observation that there is no generally accepted definition for health promotion. Existing definitions often conflict with each other, and virtually all disagree about what services are involved and to whom they should be extended.

The underlying premise of this chapter is that no objectively correct definition can exist because health promotion is highly influenced by philosophical and political considerations - what suits one group in society often is objectionable to another. Accordingly, the Task Force has concluded that each District Health Council should select its own definition in order to capture its particular political and philosophical perspective.

A process is laid out by which Health Council committee members can examine the three principal areas of controversy which characterize debates about definitions: the nature of interventions, the identification of target groups, and the scope of interventions. By selecting their preferred position in each of three areas, committee members in fact construct their own definition.

The Task Force suggests that the selection of a definition is of necessity a first step in the operation of a health promotion committee. A definition makes the subject explicit, both in terms of what it includes and what it excludes. Throughout the life of the planning committee the definition will be constantly employed - both as the basis for the remaining six functions, and in continuing dialogue with health service providers and members of the community at large. In this light, the members of the Task Force suggest that a sizable proportion of time and effort be invested exploring the implications of the various choices and debating the merits of each.

Proposals

As the District Health Council establishes itself as the local planning and co-ordinating resource for health promotion, it will begin to receive requests from community groups and agencies for assessments of their proposed services. These assessments may range from simple endorsements (for example, "The Health Council endorses non-smoking week") to complex assessments concerning the relevance and the quality of the design of sophisticated interventions for which funding monies are being sought. A seemingly infinite array of variations will undoubtedly fall between these two extremes.

In responding to these proposals, the District Health Council must first determine the criteria by which it will make its judgments. In Chapter 3, the Task Force suggests that proposals be divided into a number of categories according to their relative complexity. For each category of proposal, a set of criteria is introduced by which the Health

Council can determine whether it should endorse a proposal. In addition, suggestions are made concerning the processes by which these determinations might be made.

The function of assessing proposals from community groups and agencies will become increasingly important as health promotion services continue to be developed and require supporting funds and resources. As is currently the case with respect to treatment, rehabilitation, and chronic care services, the District Health Council will have to make decisions about the nature and the quality of the health promotion services that it considers best for its area of jurisdiction. The position of the Task Force is that this function will be much more efficiently accomplished if the time is taken to make explicit the basis upon which these decisions will be made.

Inventory

An inventory of the health promotion services which currently exist in a community is essential to the planning process. In effect, it defines "what is being done", in contrast to the plan which describes "what should be done". The difference between the former and the latter represents what needs to be addressed in order to establish the desired network of health promotion services.

Those services which qualify for inclusion into an inventory are, of course, determined by the definition of health promotion that has been selected. But further to this apparent qualifier, the District Health Council might wish to classify services in ways that will help with the planning process and will allow for the use of the inventory as a directory. Accordingly, Chapter 4 suggests a system of classification. In addition, a number of suggestions are put forward concerning the means by which the required information can be collected and updated on a continuing basis.

The publishing of an inventory in the form of a directory can also help to increase the level of community awareness concerning health promotion. Very often, members of the general public and health care providers are already aware of the network of treatment and rehabilitation services that accommodate people who are experiencing disease or disability. An inventory/directory can help to establish a corresponding awareness of the network of health promotion services, which can be portrayed as the second component in a balanced approach to community health.

Data Base

The Task Force views a data base as the collection and organizing of information in a manner which allows sound planning decisions to be made. As a rule of thumb, existing information or statistics should be used wherever possible in order to avoid costly data collection exercises.

There are few models in existence which are able to suggest ways of organizing statistics for health promotion planning. Accordingly, a model has been proposed by the Task Force and is presented in Chapter 5. It deals primarily with mortality (death) and morbidity (illness) statistics, suggesting how they can be analyzed and organized into a list of prevention opportunities in the local community.

In addition, the model discusses the possibility of measuring risk status in the community. It reviews existing sources where this type of information can be found and suggests methods by which levels of risk can be measured locally. Additional suggestions are made as to how morbidity data can be generated at the local level to augment statistics which are provided by official sources.

From the data base, it is anticipated that planners will gain an empirically-based perspective on where the opportunities exist for health promotion initiatives in their local jurisdiction.

Options

From the data base, it might be discovered that a disproportionate number of 16-20 year olds died or were injured in automobile accidents when compared to the provincial average. Thus, a target group and a "condition" (in this case, an opportunity for prevention) would have been identified. Before matters could be changed for the better, however, it would first be necessary for some sort of effective intervention to exist. That intervention might take the form of more stringent environmental controls (such as better police enforcement or traffic laws), or a direct approach (such as an educational campaign) which would modify choices regarding the driving behavior of the target group. Each activity that could be identified would become a "program option" for health promotion in the local community.

Program options, then, consist of the range of acitivities which could be generated in response to the opportunities for health promotion as they were defined by data base. They could be seen as the change agents which can be used to address the conditions for which change has been judged desirable. By definition, program options must be of either demonstrated or likely effectiveness in causing the desired change.

Chapter 6 discusses the task of transforming opportunities for health promotion into a set of program options. The output is a range of activities, each of which can be empirically justified in the local jurisdiction.

Priorities

It is unlikely that any community will be able to simultaneously address the entire range of program options for health promotion which has been identified. Accordingly, it will be necessary to set priorities among them so that the most important ones are dealt with first. Chapter 7 describes the means by which priorities can be set, both within the membership of the planning committee and by securing feedback from the community at large.

Several processes are described by which members of the planning committee can determine their priorities for the development of health promotion involvements. From these, one, which has been specifically developed for District Health Council use, is recommended and described in detail.

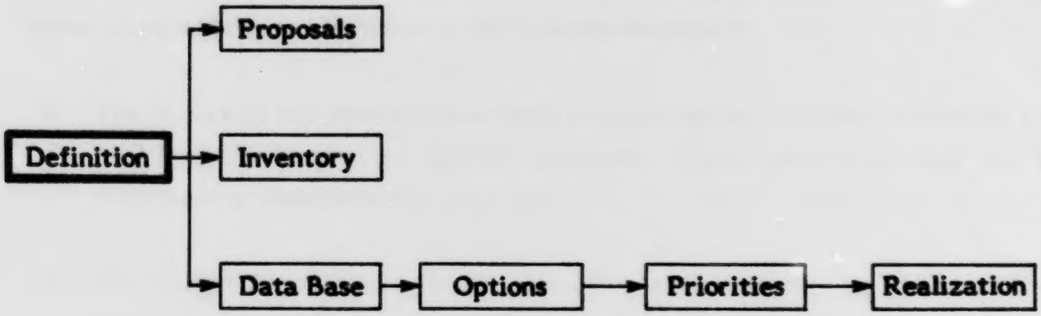
The Task Force recognizes that many reports (and their attendant recommendations) are never acted upon because they fail to include the perspective of the general public or of the service providers who are affected. In these instances, support can be withdrawn and overt opposition can be mounted to effectively forestall any action. For this reason, the Task Force recommends that planning committees endeavour to assess the priorities of the general public and of the providers of health services. A number of techniques are suggested by which these priorities can be determined and subsequently integrated into the planning process.

Realization

As envisioned by the members of the Task Force, the health promotion plan would consist of a ranked list of priority involvements which should be undertaken in the local community over a given period of time. There should be indications that the list has support from both the general public and the providers of health services. The identified priorities should also demonstrate a level of empirical justification in order to show that there is an objective basis for their selection.

The production of the plan should not mark the end of District Health Council involvement, however, as it is of no benefit to the community unless it is realized. The Task Force recognizes that Health Councils do not have the mandate to implement programs, and does not advocate that they should. Nevertheless, there does appear to be a legitimate role in which the District Health Council assumes the responsibility of enabling and facilitating the realization of the plan. This is envisioned as a continuing process of negotiation with community resources and the provision of attendant support for their responses. Chapter 8 discusses the nature of this role and suggests a variety of activities that it might involve.

CHAPTER 2 - SELECTING A DEFINITION OF HEALTH PROMOTION



Introduction

There is considerable disagreement among both practitioners and theorists concerning the definition of what health promotion is and where it begins and ends. Isaak (1980) has reviewed a number of contemporary definitions and has demonstrated the extent to which opinions differ, and in many instances, conflict. The following examples, which are drawn from his review, illustrate how extreme differences in perspectives can be:

> "Health promotion services deal primarily with well people who want to become healthier and achieve their individual potential." (Ardell, 1978).
>
> " Health promotion includes those activities intended to forward or encourage the maintenance of health and the prevention of disease. Included are health promotion and primary prevention programs directed at the "well" or "healthy" population and at high risk groups. Excluded are secondary and tertiary prevention programs aimed at identified patient groups." (Health Education Promotion Unit, 1980).

In the midst of this lack of agreement, however, federal and provincial levels of government are suggesting that further increments in the health of the population can result only from new generations of health promotion initiatives and not from putting increased emphasis on the treatment system. In so doing, they are shifting their attention from the unhealthy population to the healthy population.

In the Province of Ontario, for example, the past orientation of the health care system has been towards the remedial services which have been aimed at the treatment of diseases of institutional settings. In recent years, however, the Ministry of Health has developed a policy objective which introduces a shift towards the delivery of disease prevention and health promotion services from community-based facilities (Health Promotion and Information Branch, 1982). The responsibility for planning and co-ordinating the evolution of these services will fall to local planning bodies, such as District Health Councils, which according to a Ministry of Health Survey (1980) have themselves asked for guidance in defining health promotion. Clearly, the ambiguities surrounding the definition must be resolved before any planning can occur.

A key assumption which lies beneath the quest for a definition of health promotion is that there exists one correct version which best describes the nature of the field. It is suggested here, however, that variations among definitions are essentially matters of preference, and cannot be characterized as right or wrong. They are determined by the orientation of the group or agency which is generating the definition and reflect its preferences among competing theories as well as its attention to the political considerations which might impinge upon it.

In light of this observation, the task of defining health promotion might better be served if the principal options are made explicit and local organizations or authorities are encouraged to select the definition which best fits their individual requirements and circumstances. To this end, a decision tree has been developed to identify the three fundamental issues which must be resolved in selecting a definition of health promotion.

Variations in Definitions

For practical purposes, the origin of the current interest in health promotion can be traced to the Federal working document A New Perspective on the Health of Canadians (Lalonde, 1974).[1] This document represents an attempt by the Government of Canada to introduce a shift in the focus of the health care system away from treatment and rehabilitation and towards health promotion and disease prevention.

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[1] While the concept of health promotion may pre-date the Lalonde document, it is commonly recognized as a major influence on the current literature (Ardell, 1978).

The roots of current definitions of health promotion can, for the most part, be traced to three issues which are identified in the Lalonde document:

i) The Nature of the Intervention: Interventions can be designed to enhance levels of health and/or to prevent specific illnesses. Health promotion does not include treatment or rehabilitation functions.

ii) The Target Population: Health promotion activities may be aimed at "healthy" populations and those considered "at risk" for specific diseases, but not towards populations which are already experiencing disease or disability.

iii) The Scope of Intervention: Health promotion activities may seek to improve health by changing individual lifestyles, the physical environment, and human biological functioning. The scope can include any or all of these strategies.

As stated earlier, the primary sources of variation lie within these three concepts. The major variants are depicted in Figure 2.1, which incorporates the options into a decision tree to yield six alternate definitions of health promotion. Each level of the decision tree corresponds to one of the above concepts and represents a fundamental issue which must be resolved in selecting a definition. In order to provide further clarification, each of the six definitions is described below.

Elaboration of Figure 2.1:

The following statements describe each of the six definitions which are depicted in Figure 2.1:

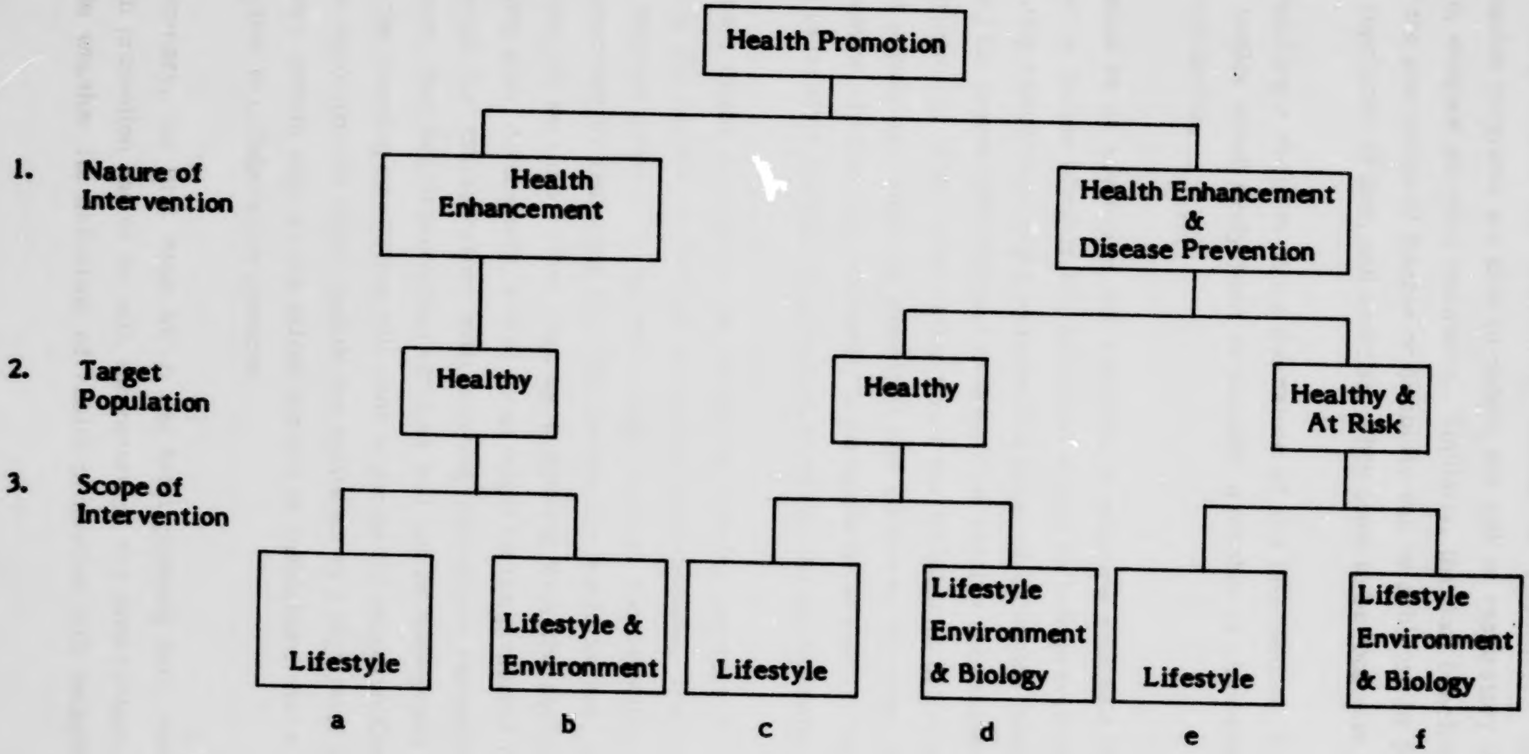
a) Health promotion is targeted towards healthy people and seeks to enhance health by effecting change in individual lifestyle.

b) Health promotion is targeted towards healthy people and seeks to enhance health by effecting changes in individual lifestyle and in the environment.

c) Health promotion is targeted towards healthy people and seeks both to enhance health and to prevent the onset of disease by effecting change in individual lifestyle.

Figure 2.1

Variations in the Definition of Health Promotion


Health Promotion
1. Nature of Intervention
Health Enhancement
Health Enhancement & Disease Prevention
2. Target Population
Healthy
Healthy
Healthy & At Risk
3. Scope of Intervention
Lifestyle
Lifestyle & Environment
Lifestyle
Lifestyle Environment & Biology
Lifestyle
Lifestyle Environment & Biology
a
b
c
d
e
f

d) Health promotion is targeted towards healthy people and seeks both to enhance health and to prevent the onset of disease by effecting changes in individual lifestyle, the environment and human biology.

e) Health promotion is targeted towards both healthy people and people at risk of certain diseases, and seeks to enhance health and to prevent the onset of disease by effecting change in individual lifestyle.

f) Health promotion is targeted towards both healthy people and people at risk of certain diseases, and seeks to enhance health and to prevent the onset of disease by effecting change in individual lifestyle, the environment and human biology.

The Nature of the Intervention:

Deciding on the nature of the intervention is at once the most fundamental and the most confusing issue in defining health promotion. The issue centres on the question of whether health promotion should be concerned with disease prevention, or should focus solely on the enhancement of existing levels of health. A review of definitions suggests that while some consider health enhancement as completely separate from disease prevention, the majority of definitions treat the two as inseparable (Isaak, 1980).

Those who advocate separating the concepts (refer to definitions "a and b" from Figure 2.1) perceive health promotion as enhancing levels of health by assisting individuals to narrow the gap between their existing health status and their potential or ideal states of health and well-being. In support of this approach, research is beginning to yield correlations which link high levels of fitness, correct diet and the use of relaxation techniques to increases in reported job satisfaction and productivity, the ability to manage stress, and measures of overall "happiness". (Shain, 1982).

Accordingly, as people are persuaded to adopt a variety of health enhancement activities, they can move towards a state of "high level wellness" (Ardell, 1980) and enjoy a happier, more satisfying life.

Those who advocate combining the notions of health enhancement and disease prevention generally argue that it is very difficult to separate the two in reality and that a dual focus has greater potential for overall impact on a population. Certainly it is not difficult to perceive that many programs simultaneously address the two goals of enhancing health and preventing disease or disability. As an example, smoking cessation programs are able to reduce the risk of respiratory disease and, at the same time, enhance physical endurance. Similarly, the dual benefits of health-enhancement and the prevention of disease or disability can be achieved by programs for weight loss, the regulation of diet, and exercise. They seem to be "opposite sides of the same coin".

In reaching a decision about the nature of the intervention, local planning authorities and bodies would likely want to consider a number of circumstances within their areas of jurisdiction.

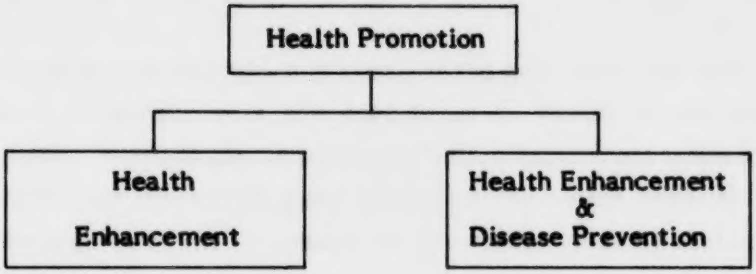
It could be of advantage, for example, to examine available statistical information in order to decide whether the definition should include prevention. In this context, the planning committee might examine the rates of incidence (that is, the number of new cases) for preventable diseases to determine whether they suggest a need for preventive programming. Also, information about the frequencies of certain risk behaviors in the local population might be examined and compared to other jurisdictions in order to determine whether the community is particularly "at risk". (This type of survey is often used to measure alcohol consumption, smoking, the use of seatbelts, and so on.)

Planners might also study the nature of existing services in the local jurisdiction in making the decision to include preventive interventions. The existence of an effective and discrete prevention network might lead to the selection of the single focus on enhancement by reasoning that the community would be best served by adding a new network of services rather than by tampering with the satisfactory operation of an existing one. Alternately, a dual focus might be the preferred option if there is strong potential for collaboration with existing preventive resources. It is more likely, however, that health promotion services will not be widespread in the community, and that the planning committee will want to assess the opportunities for their introduction. These opportunities might include the existence of a high level of interest within a key delivery system such as the school system or indications that a local media network is receptive to collaborative ventures.

In summary, the first issue which the local planning body must consider in defining health promotion has to do with the nature of the intervention. Specifically, it must decide whether its definition of health promotion will include only those activities intended to enhance the current levels of health of individuals, or will be extended to include activities which are intended to prevent the onset of illness. The option is depicted in Figure 2.2 below:

Figure 2.2

The Health Enhancement and Disease Prevention Option



The Target Population:

The second major issue that shapes the definition of health promotion involves the delineation of target populations to which programs and other initiatives will be directed. In the larger perspective, there are two principal alternatives for target populations:

- i) healthy people
- ii) healthy people and those at risk.[2]

Figure 2.3 integrates these options within the "Well-Ill Continuum", which is derived from the work of Hamilton (1980). In addition, the Continuum aligns target populations with primary, secondary, and tertiary prevention strategies and illustrates the traditional jurisdictions of the treatment system and the health promotion system.

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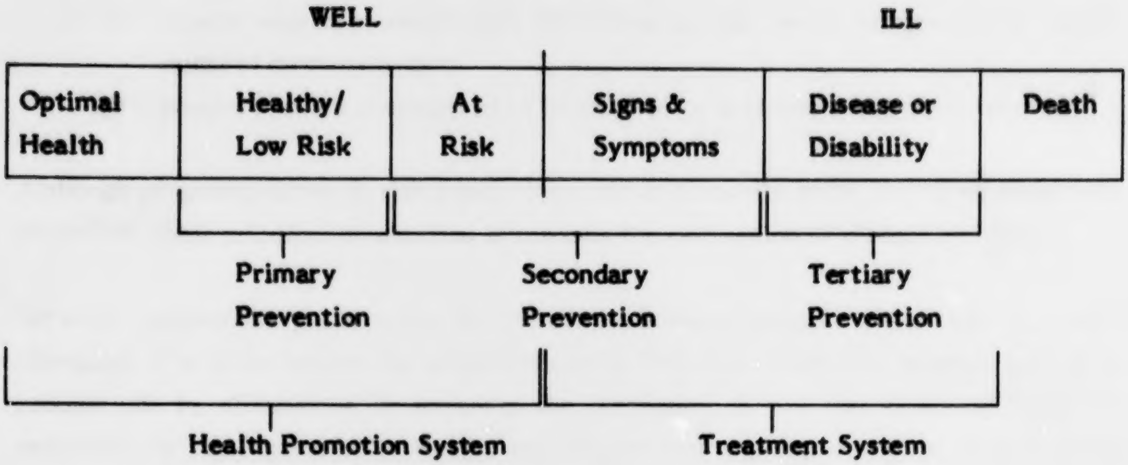
[2] It is possible to envision a third target group at which enhancement and prevention-type programs can be directed: those who are experiencing disease or disability. In these instances, however, health promotion should not be confused with the normal treatment and rehabilitation services which are delivered in response to disease and disability. Although the activities may be similar, their functions are quite different (Lange, et al, 1981; Leicester, et al, 1981).

Figure 2.3

Target Populations as Defined by the Well-Ill Continuum


WELL
ILL
Optimal Health
Healthy/ Low Risk
At Risk
Signs & Symptoms
Disease or Disability
Death
Primary Prevention
Secondary Prevention
Tertiary Prevention
Health Promotion System
Treatment System

Target populations on the right side of the continuum, which includes the categories of "signs and symptoms", "disease or disability", and "death", are most often attended to by the treatment and rehabilitation components of the health care system. Within this response intervention with populations which are experiencing early signs and symptoms of illness is often considered to be of secondary prevention as it is practised by the treatment system.[3] The response to disease and disability primarily involves treatment and rehabilitation services, and is often referred to as tertiary prevention.

The left side of the continuum includes "at risk" status, "healthy" status, and "optimal health" status. The populations in the "healthy" and "at risk" categories are generally considered to be the domain of the health enhancement and disease prevention networks. The "healthy" population is characterized by two criteria:

- its members are not experiencing any illness; and
- are not associated with any high risk factors (including genetic and social predisposition, environmental conditions, and behavioral correlates).

---

[3] The focus on populations which are at risk, but are showing no signs or symptoms can be regarded as another facet of secondary prevention. Such services are seldom offered by the treatment system. Rather, they are most often delivered by prevention-oriented organizations and agencies.

In effect, the "healthy" population consists of those individuals whose risk of disease or injury is low and might be more accurately described as being at "low risk" of disease. Programs may focus on this group as a target population for either of two strategies:

i) The first is consistent with the exclusive health enhancement orientation, and would seek to move "healthy" or "low risk" people in the direction of optimal health, (refer to definitions "a and b" in Figure 2.1). Advocates of this strategy argue that good health and the quality of "well being" is more than just being at low risk of experiencing disease.

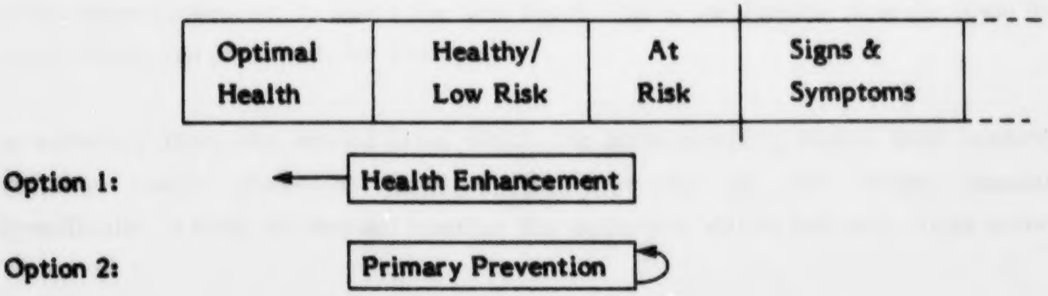
ii) The alternate strategy which is aimed at the populations of "healthy" or "low risk" people is consistent with the dual focus on health enhancement and disease prevention. Accordingly, it addresses both enhancement goals (to enhance levels of health), and prevention goals (to inhibit movement towards "at risk" status). The strategy attempts to achieve its prevention goals by seeking to restrain the adoption of risk behaviors and by attempting to inhibit environmental deterioration (refer to definitions "c and d" in Figure 2.1).

Examples of programs which are aimed at healthy people and incorporate the dual enhancement and prevention focus include those intended to forestall smoking in young people, to encourage nutritious eating habits, or to encourage the adoption of sports that can be enjoyed throughout life. In each case, enhancement benefits accrue to an already healthy population while the prospects for ill health are simultaneously lessened.

The two strategies which are aimed at healthy people are illustrated in Figure 2.4.

Figure 2.4

Strategies Aimed at Healthy People



In addition to a focus on the population of healthy people, the definition of health promotion may be extended to include people who are "at risk". In this context, risk is usually defined as meeting any of the following three conditions:

i) people who have adopted risk behaviors;
ii) people who are predisposed to illness as the result of genetic or socio-cultural circumstances;
iii) people who are predisposed to illness due to environmental circumstances.[4]

Although programs aimed at risk populations may incorporate some health enhancement activities, their principal orientation is towards the prevention of disease or injury.

Separate prevention goals apply to the three sub-populations within the "at risk" category. For those whose risk is determined by their behaviour, the program goal is to reduce risk by eliminating or lowering the frequency of the risk behavior (refer to definition "e" in Figure 2.1). Weight loss clinics and smoking cessation programs are examples of this type of program. An alternate goal is also conceivable for this group: to insulate its members from the consequences of their behavior. This approach, although easy to conceive, is difficult to realize. An example would be the creation of "safer" cigarettes which would enable the behavior of smoking to continue, but would reduce the likelihood of health consequences.

For the second sub-population, the level of risk is defined by a genetic abnormality or susceptibility, or by some kind of social or cultural characteristic that is associated with an increased likelihood of disease. As an illustration of the latter group, children of alcoholics are often considered to be at increased risk of becoming alcoholics themselves as a result of their social environment. Ironically, people in this group may be ostensibly healthy, even though their risk of disease or injury may be increased. For this group, program goals usually involve providing some measure of insulation or compensation so that the level of risk is contained to some extent. Programs to increase feelings of self-esteem and personal competence among the children of alcoholics are an example of this strategy (refer to definition "f" in Figure 2.1). In spite of these programs, members of this group usually maintain their risk status, albeit to a less threatening extent.

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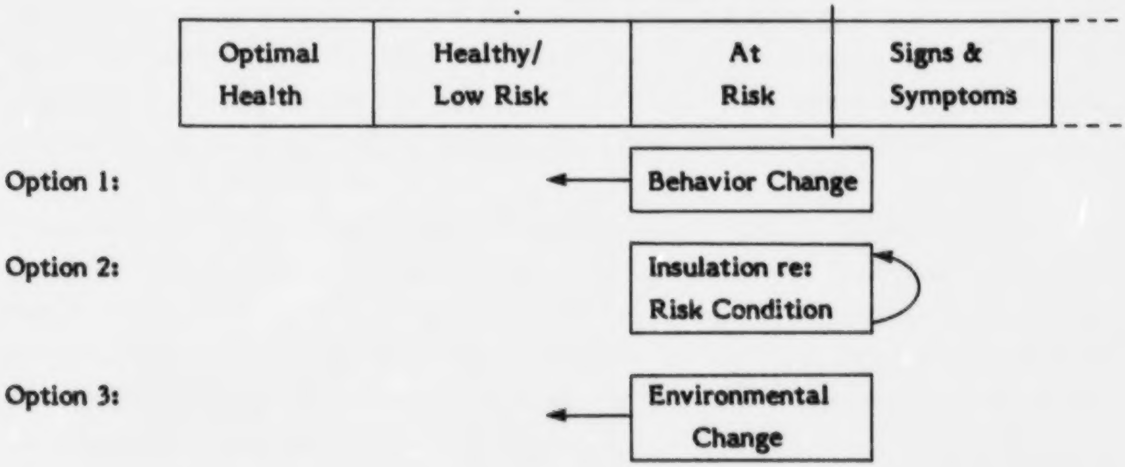
[4] In some instances, the environmental conditions can have a direct effect on health status (as with air pollution), while in others, they may have an indirect effect (by facilitating the adoption of high risk behaviors).

For the third sub-population, people threatened by environmental circumstances, the program goals are simply to reduce the environmental hazard or threat to health and thereby eliminate the risk status of the affected population (refer to definition "f" in Figure 2.1). The removal of asbestos insulation in schools can be considered as an example of this type of program. An alternate strategy is to shield people from the environmental risk so that the extent of the damage is minimized. As an example, wearing face masks might be a response to extreme levels of air pollution.

Figure 2.5 depicts the health promotion strategies that are aimed at the "at risk" population.

Figure 2.5

Strategies for the At Risk Population

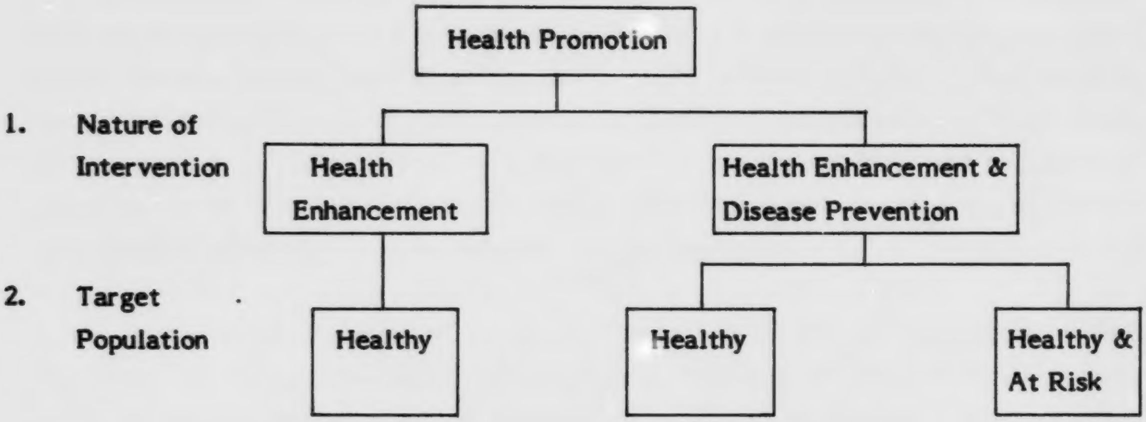


Those who advocate adopting a definition which incorporates a focus on "at risk" populations argue that interventions for these people are particularly worthwhile in that they seek to avoid undesirable, and often unpleasant, health consequences. Furthermore, on a pragmatic level, they argue that it is sometimes difficult to separate the populations of "healthy" and "at risk" people for an intervention. In this light, it is often more convenient to adopt the dual focus (this is particularly true for mass media public education programs, for example).

In summary then, the second issue which the local planning bodies must consider in defining health promotion involves the selection of the target population. Specifically, it must be decided whether the definition will include only those activities which are directed at healthy populations, or will be extended to include activities directed at populations at risk. Figure 2.6 identifies these alternatives and places them in context with the first set of options.

Figure 2.6

Options for Target Populations


Health Promotion
1. Nature of Intervention
Health Enhancement
Health Enhancement & Disease Prevention
2. Target Population
Healthy
Healthy
Healthy & At Risk

It should be noted that where the definition of health promotion considers the nature of the intervention to be health enhancement only, the target group must be healthy people. Health promotion strategies in this case will seek to move these people in the direction of an optimal state, by enhancing their current levels of health.

Where both health enhancement and disease prevention are included, target groups may be drawn from healthy populations or those at risk. A focus on healthy people may draw from strategies to enhance their current levels of health or to restrain the adoption of risk behaviors. A focus on at risk populations may involve strategies to reduce the frequency of risk behaviors, to insulate the individuals from risk conditions, or to reduce the environmental hazards.

The Scope of the Intervention:

In the working document entitled A New Perspective on the Health of Canadians, Lalonde (1974) presents what he refers to as the health field concept. In it, he argues that there are four major determinants of health: the health care system, the environment, human biology, and lifestyle. He identifies individual lifestyle as the area in which the greatest potential exists for impact on community health. Many definitions of health promotion have subsequently reflected this emphasis on lifestyle.

The third issue in the definition of health promotion concerns itself with the question of whether to narrow the scope to a lifestyle orientation, or to broaden it to include environmental and biological strategies.

The arguments in favour of an exclusive focus on lifestyle stem from the opinion that the rates for the most common causes of disease, injury, and death could have been lowered had changes in individual behavior been effected. The list of most damaging behaviors includes smoking, drinking, exercising too little, eating too much, eating the wrong food, managing stress poorly, and failing to use seatbelts (Bauer and Wilson, 1981). They are labelled as "high risk behaviors", and, to a greater or lesser extent, are viewed as being chosen by each individual. Accordingly, should the individual be persuaded to choose low risk behaviors in place of high risk alternatives, the likelihood of experiencing disease, injury, or premature death is argued to be reduced.

Others counter, however, that lifestyle choices cannot properly be addressed without examining the attendant socio-political, environmental and biological influences. Health behavior is portrayed as a function of complex interaction between the individual and his social and physical environment. Accordingly, interventions must be directed towards all factors which influence the individual's behavior, and not at the decision-making processes of the individual.

In addition, it is often argued that to focus exclusively on lifestyle puts undue emphasis on this one determinant by placing sole responsibility for change upon the individual when his health has been strongly influenced by the social or physical environment or by human biology. This state of affairs has been labelled "blaming the victim" (Crawford, 1977, Labonte and Penfold, 1981) and criticized for being both unjust and limited in its effectiveness.

The inclusion of environmental and biological considerations in the definition of health promotion broadens the scope for possible interventions and is argued to increase their potential for effectiveness. In addition, however, a further level of controversy is introduced.

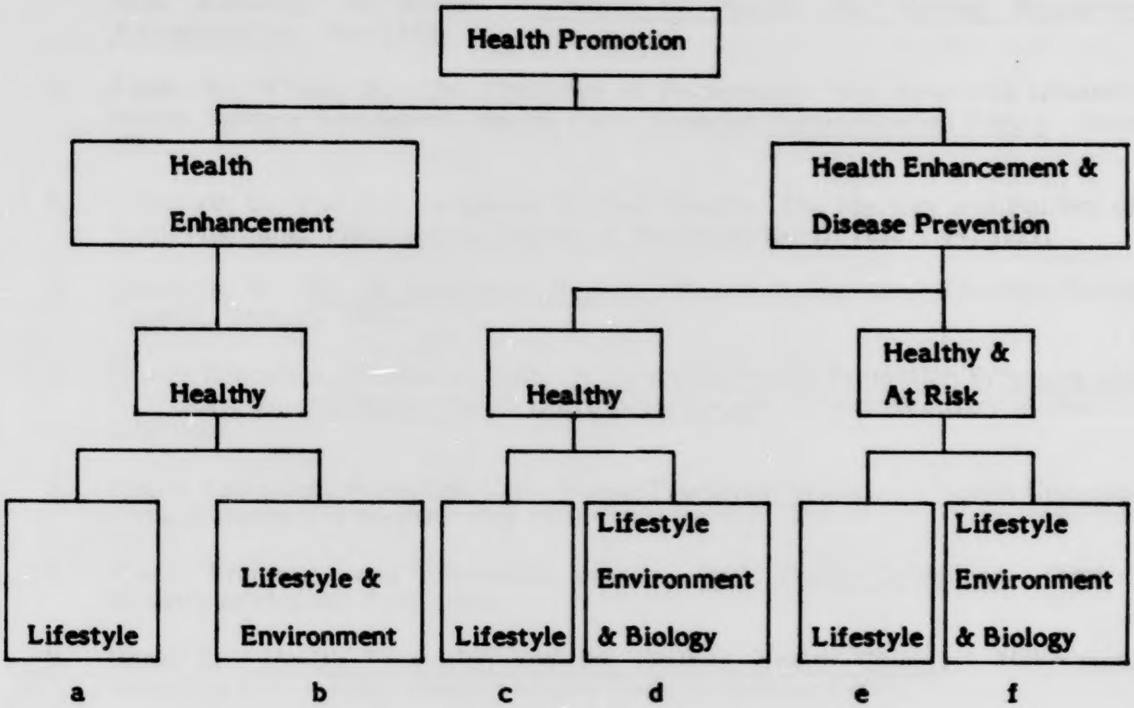
Typically, environmental initiatives involve the development of government policy, regulations, and legislation. Because of this, the strategy often pits government against private industry which can have a vested interest, for example, in increasing the per capita consumption of tobacco and alcohol, or in avoiding the added costs of pollution controls. It is a fact of life that the business interests which are likely to be affected by environmental initiatives are often able to exert considerable pressure on politicians who are perceived to threaten their profitability. Thus, from the political perspective, environmental action is often considered "infeasible" and support is shifted to programs which feature fewer liabilities (Simpson, 1977; Worden, 1979). The political considerations which accompany environmental initiatives extend not only to all levels of government, but also to funding bodies (such as the United Way) and to individual agencies, which are susceptible to the withdrawal of support should their legitimate programming efforts prove threatening to vested interests.

In the final analysis, the question of whether to include an environmental focus within the scope of health promotion often involves resolving the classic public health dilemma. On the one hand, ethical considerations suggest that adopting a broad scope is more appropriate, whereas, on the other, political considerations must be assessed to anticipate the nature and extent of any reaction.

In summary, the third and final issue to be considered in defining health promotion is the scope of the intervention. Specifically, the local planning body must decide whether to extend its definition to include interventions which are directed towards the environment and human biology, or to include only those directed towards individual lifestyle. This choice must be made irrespective of those taken regarding the nature of the intervention or the target population. The full set of options are repeated in Figure 2.7.

Figure 2.7

The Major Options in Defining Health Promotion


Health Promotion
Health Enhancement
Health Enhancement & Disease Prevention
Healthy
Healthy
Healthy & At Risk
Lifestyle
Lifestyle & Environment
Lifestyle
Lifestyle Environment & Biology
Lifestyle
Lifestyle Environment & Biology
a
b
c
d
e
f

Summary and Discussion:

Recognizing that there is not one correct definition of health promotion, an attempt has been made to facilitate the task of selecting a definition. This is done by making explicit the principal options and encouraging local planning authorities and bodies to select the definition which best fits their requirements and circumstances.

Figure 2.1 presented a decision tree which detailed the potential variation in definitions based on three fundamental issues: the nature of the intervention, the target population, and the scope of the intervention. Six alternate definitions were identified and the various arguments leading to the different definitions were summarized.

Definition "a" from Figure 2.1 is the most limited of the six options as it includes only those activities directed towards healthy people and involving individual lifestyle in an effort to improve levels of health. Some fitness programs, nutritional awareness, and stress management are examples of activities consistent with this definition.

At the other extreme, definition "f" from Figure 2.1 is the broadest of the six categories of definition, including activities directed towards healthy and "at risk" people and involving individual lifestyles, the social and physical environment, and human biology in an effort both to improve levels of health and to prevent the onset of disease. In this example, activities include those directed at individuals in an effort to convince them to adopt healthy behaviors (such as smoking cessation, reduction in alcohol consumption, and increased levels of physical fitness) as well as environmental and biological concerns (such as immunization, environmental protection, cigarette and alcohol pricing legislation, and the provision of recreation facilities).

It is hoped that the discussions and options which are provided will enable local planning committees to develop a definition of health promotion which is most suitable to their needs. Although the options and the cases for each have been made explicit, the process by which local decisions should be made has not. It is envisioned, however, that the process of selection will include various techniques to foster debate and receive feedback from members of the general public and from the community of health professionals. In so doing, the likelihood is increased that the definition which is ultimately selected will be congruent with the preferences and requirements of important sectors of the local community.

REFERENCES

1. Ardell, D. High Level Wellness and the H.S.A.'s: A Health Planning Success Story. American Journal of Health Planning. July 1978.

2. Ardell, D., Robins, L. High Level Wellness and the H.S.A.'s: The Failure to Move from Advocacy to Action. Journal of Health and Human Resources Administration. May 1980.

3. Bauer, K., Wilson, R. The Challenge of Prevention: Are America's Greatest Health Burdens Avoidable? Health Care Financial Administration Forum. June 1981.

4. Crawford, L., You Are Dangerous to Your Health: The Ideology and Politics of Victim Blaming. International Journal of Health Services. Vol. 7, #4, 1977.

5. Hamilton, G. Health Promotion Report. Kenora-Rainy River District Health Council. January 1980.

6. Health Education, Promotion Unit. A Survey of Health Promotion Programs and Activities, Ontario Public Health Units/Departments. Ontario Ministry of Health. May 1980.

7. Health Education, Promotion Unit. Health Promotion by District Health Councils. Ontario Ministry of Health. May 1980.

8. Health Promotion and Information Branch. Basic Policy Guidelines. Ontario Ministry of Health. April 1982.

9. Isaak, S. Health Promotion and the District Health Council. Haliburton, Kawartha & Pine Ridge District Health Council. February 1981.

10. Labonte, R., Penfold, S. Canadian Perspectives in Health Promotion: A. Critique. Health Education. April 1981.

11. Lalonde, M. A New Perspective on the Health of Canadians. Health and Welfare Canada. 1974.

12. Lange, M., Ardell, D. Wellness Programs Attract New Markets for Hospitals. Hospitals. November 16, 1981.

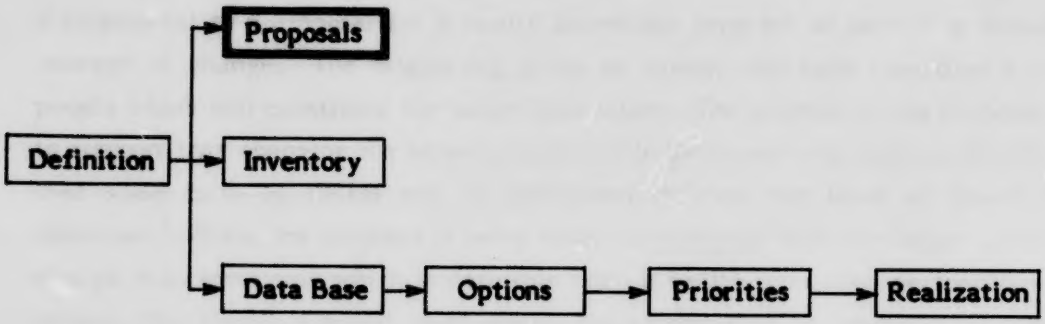
13. Leicester, W., Martin, S., Ardell, D. Wellness Promotion in the Canadian Hospital. Dimensions in Health Service. September 1981.

14. Shain, M. The Value of Health Promotion in the Prevention of Alcohol Abuse. Alcoholism and Drug Addiction Research Foundation. 1982.

15. Simpson, R. Alcohol Control Policies in Ontario 1966 to 1976. M.A. Thesis Hamilton: McMaster University. 1977.

16. Worden, M. Popular and Unpopular Prevention. Journal of Drug Issues. Summer 1979.

CHAPTER 3 - METHODS FOR REVIEWING HEALTH PROMOTION PROPOSALS



Introduction

As the District Health Council establishes itself as the local planning and co-ordinating resource for health promotion, it will begin to receive requests from community groups and agencies for assessments of new services which they propose to deliver. Some of these requests are likely to be made before the entire planning process has been completed. The requests may range from simple endorsement, on the one hand, to a complex analysis and assessment, on the other. All must be reviewed, however, if the Health Council is to exercise its role of influence in the continuing evolution of the health promotion services network.

While it is possible to identify a list of universal criteria and questions which can be used to review all proposals, it is more advisable that the review be tailored by an appreciation of who is submitting the proposal and exactly what is being proposed. For example, a request from a community agency to endorse its non-smoking week activities should be viewed differently from a proposal for Ministry of Health funding in support of a joint University/Public Health program which is aimed at reducing the rate of smoking in the adult population.

While both proposals are intended to influence smoking behaviour, these requests differ in two important ways. First, the proposed interventions are different. The activities associated with non-smoking week are likely to be built around educational materials which have been previously developed, whereas the smoking reduction program may be based on new theoretical approaches to behavioral change, and is designed to test their effectiveness. Second, the expectations of the originators of the proposals are different. The community agency is looking for endorsement and would neither expect nor require a rigorous review, whereas the University/Public Health Unit sponsors, who are requesting public funding, would expect a high degree of scrutiny to precede their endorsement.

Applying the level of rigor which is required in the second case to a proposal from the community agency may succeed only in alienating the agency. While the District Health Council must be knowledgeable of which questions to ask in a rigorous review, it must be sensitive to the dangers of applying these questions to all requests for assessments or reviews.

District Health Councils, particularly those which have been recently formed, can easily be perceived by community agencies as performing a judgmental function which involves accepting or rejecting their work. Some agencies might conclude that the Health Council is trying to tell them how to do their work. Under this perception, the Council runs the risk of becoming perceived as a bureaucratic obstacle which must be overcome. By "over-reviewing" proposals, Health Councils can exacerbate this problem and actually reduce the level of communication and co-operation between themselves and community agencies. This, of course, can have negative repercussions, especially with respect to the later phases of the planning process.

An effective strategy to avoid the problem is to begin the process of communication long before proposals arrive at the District Health Council level, either through informal communication or by including agencies directly in the planning process. In this way the expectations of both the agencies and the Health Council can be made clear and realistic, thereby making the task of proposal-writing much more straightforward.

The local District Health Council, then, must make a decision about which level of review is appropriate for a specific proposal, based on the type of intervention which is proposed and the expectations of the originating group or agency. In so doing, the Health Council must attempt to find a balance between reviewing a proposal in too much detail, with the possible consequence of alienating the sponsoring agency, and reviewing a proposal in too little detail, with the possible consequence of endorsing a proposal that may later show itself to not merit support.

Fundamental to a proposal for a health promotion program or service proposal is the concept of change. The originating group or agency will have identified a group of people which will constitute the target population. The essence of the proposal will be to suggest that changing the target population in some way will increase the likelihood that some form of illness will be prevented or that the level of health will be enhanced.[1] Thus, the proposal is being made to intervene with the target group and to change it in some way which is desirable from a health promotion perspective. In its review, the Health Council must assess the proposal as an intervention, and make judgments about its desirability and about the likelihood that it will achieve favourable impact. The following section suggests a number of approaches and questions that can be used to make these judgments.

Suggested Questions for the Review Process

As stated above, the District Health Council will need to know all of the questions that should be asked in an in-depth review but, based on the type of request from the sponsoring agency, may choose to apply only some of them. As a minimum, the Health Council might consider the following questions as illustrative of those which could be used:

1. At which target group is the proposed intervention aimed?
2. In what way will members of the target group be changed as a result of the intervention?
3. How will the intervention cause that change?
4. Why is that change for the better? (How is it associated with better health?)
5. How will it be determined that the change was successfully introduced into the target group (That what was intended to happen, actually did)?

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[1] As identified in Chapter 2, the change that is sought can occur in the behavior of the target population, it may lead to a modification of environmental conditions, or it may intervene into the realm of human biology.

When a more rigorous assessment is needed the following list of twelve questions might be considered. Questions 1 to 4 are general; questions 5 and 6 relate to proposals which intend to use interventions that have previously been shown to be effective; questions 7 to 12 relate to the evaluation of outcomes; and the final four questions are for proposals which are intended to test the effectiveness of a new intervention.

1. What is the purpose of the proposed program or service?
   Is the proposal easy to understand? Does it clearly define what the intervention is and the rationale for providing it? Are the objectives or goals clearly stated? If a similar program or service already exists, why is a second one being proposed?

2. What is the target population?
   Who will receive the intervention? By what means will they be recruited? What kind of information will they be given about the program? Are they likely to consent? Will important segments of the target population be missed?

3. Can it be done?
   What evidence is there that there is a high enough demand for the program? Is the intervention too complex, time-consuming, unpleasant or risky? Are sufficient resources (equipment, trained staff) available? How will the program be monitored? How does the intervention propose to change the target population? What is the theoretical sequence by which the intended change will be caused?

4. Are there any other important considerations?
   Are there moral or ethical implications? (For example, could the intervention be considered as human experimentation? If so, the risks must be specified, and the reviewers should be satisfied that accepted procedures for informed consent will be followed. In addition, reviewers should note whether confidentiality is an issue, and if it is, should be satisfied that data and anonymity will be safeguarded.) Reviewers should also note whether the proposal is consistent with relevant Ministry guidelines, and what kind of impact it will have on the community. (For example, what kind of impact will it have on existing services, and will there be strong pockets of opposition or support for it from the rest of the health care network?)

The following two questions apply only to those proposals which intend to duplicate or "replicate" interventions which have been used in other jurisdictions or settings and have been shown to be effective.

5. What is the evidence that this program is effective?
   How was it collected? Have the results been confirmed through replication?

6. Has the program been modified, or should it be, to suit your community?
   Do these changes threaten its effectiveness?

Even though the proposal is for an intervention which is generally accepted as effective, it should nevertheless have some level of monitoring and evaluation applied to it. The evaluation and monitoring components become more important and must be more rigorous if the effectiveness of the proposed intervention has yet to be demonstrated. To get a clearer understanding of the potential impact of the intervention, reviewers must ask about the nature of the evaluation. The following three questions address the evaluation component of a proposed service or program.

7. How will the success of the intervention be determined?
   What indicators of success will be employed? Will the success of the program be determined by the number of people who participate, by the percentage who subjectively report some change in attitude or behaviour, or by a measured change in health status? Although some positive change in health status is the ultimate goal, this is usually a long-term outcome and, in the short run, it may be necessary to accept evidence of a high participation rate or of change in risk behaviour as an indication of the merit of the intervention.

8. How is this change to be measured?
   Reviewers should look for evidence that the measurement techniques are valid and reliable. This simply means that they actually measure the indicators that have been selected, and can be counted upon to give accurate measurements.

9. Was the design of the evaluation developed for the program or service, or has it been used before?
   If the evaluation design has been used before, what is known about the strength of the results that it produces? That is, how confident can we be that the outcome

is accurately assessed? Will strong conclusions be drawn from the design? If it is a new design, has someone with credentials in evaluation design endorsed it?

The following three questions are specific to proposal which intend to test the effectiveness of an intervention:

10. Is the sample size large enough to lead to a conclusion about the effectiveness of the intervention?
    The appropriate sample size will vary according to the nature of the demonstration. The proposal should identify and justify the number of participants which it will include.

11. Will a Control Group (a group which does not receive the program) be used for comparison purposes?
    Stronger evaluation designs include a comparison group. This technique increases confidence that the effects of the intervention are being measured and not those of some extraneous event or force.

12. Is the sampling method random?
    Assigning people to groups which receive the intervention and those which do not in a random fashion is a way to further remove bias from the results. When randomizing techniques are used, confidence can be expressed that any measured change in behaviour or health status was due to the intervention and not to the inherent characteristics of the participants. Random allocation means that each person has an equal chance of being assigned to either the intervention or the non-intervention group, and that factors such as age, sex, and so on, which might influence the outcome, will affect both groups equally.

Accepting or Rejecting a Proposal

While the principal purpose of the review process, however detailed, is to reach a decision about endorsing a specific proposal, a secondary purpose might be to educate community groups and agencies. If a consultation process between the sponsoring group and the Health Council begins with the idea stage, then many of the issues which are addressed through the review questions will be incorporated into the development of the proposal.

With this process in place, agencies and groups are less likely to perceive the Health Council as a type of academic review board before which they must defend their proposal. The hostilities and resentments which otherwise might arise, can thus be avoided.

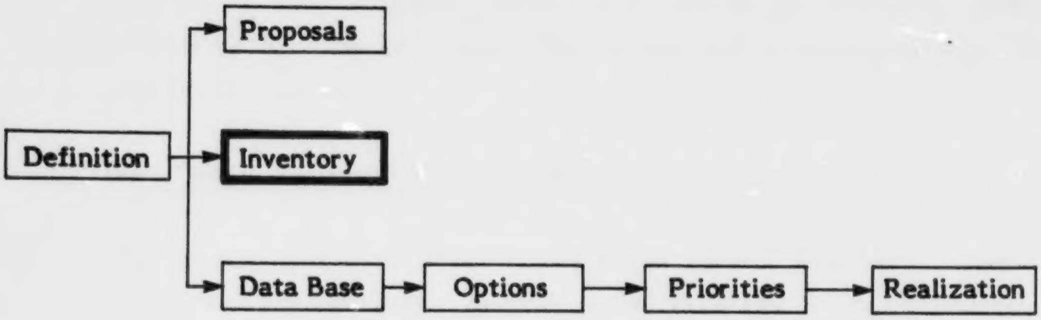
The function of assessing proposals from community groups and agencies will become increasingly important as health promotion services continue to be developed and make demands upon funds and other program resources. As is currently the case with respect to treatment, rehabilitation, and other curative health care services, the District Health Council will have to make decisions about the nature and the quality of the health promotion services that it considers best for its area of jurisdiction. The position of the Task Force is that this function will be much more efficiently accomplished if the time is taken to make explicit the basis upon which these decisions will be made.

ADDITIONAL READINGS

1. Babbie, E. The Practice of Social Research. Wadsworth, 1975.

2. Friedman, G. Primer of Epidemiology. McGraw-Hill, 1980.

CHAPTER 4 - THE DEVELOPMENT OF A HEALTH PROMOTION INVENTORY



Introduction

As part of the process of planning for health promotion, the District Health Council will want to develop an inventory of existing health promotion services in the local area. This baseline information is required before priorities can be set among program options, as discussed in Chapter 7 of this Guide. Well before that stage in the planning process, however, many Health Councils will want to have a picture of existing health promotion services as a backdrop to their initial deliberations.

District Health Councils are accustomed to completing inventories of local services as part of the process of planning in all areas of health services. For this reason, a general guide for conducting inventories has been developed by the District Health Council Research Program (1983). This chapter briefly reviews some of the essential steps involved in completing an inventory of health promotion services. It is drawn largely from the inventory guide, to which the reader is referred, should greater detail be required.

Before embarking on the inventory process, the Health Council must clearly define what is to be documented. This will depend to a large extent on the definition of health promotion which has been selected by the Health Council (see Chapter 2 of this guide).

For example, the Niagara District Health Council (1982), as part of its Health Promotion Needs Study, centred its inventory on education programs offered through the school system, agencies and industry. The Grey-Bruce Health Council, on the other hand, focused on health promotion services related to three problem areas, including respiratory diseases in children (from birth to 14 years of age), maternal and neonatal health, and accident and injuries across all age groups.

An overview of the Steps in the Inventory Process

Once the definition of health promotion has been established, the inventory process can be summarized by the following steps:

(i) Establish the goals and objectives

The goals and objectives of the inventory must be clear before any information is collected. The major goal is usually to collect information on what services are available. It is intended to provide the proper context for planning and to assist with the identification of gaps, duplications, and problems. The local Health Council may have secondary goals, however, such as developing a data bank or establishing a rapport with service providers.

(ii) Allocate resources, staff, space, and material

Realistic plans have to be made for the assignment of staff resources or securing additional staff to the various functions associated with an inventory. In addition, consideration must be given to periodically up-dating the inventory, once it has been completed.

(iii) Determine the scope of the inventory

As suggested earlier, the scope is broadly defined by the definition of health promotion and the goals and objectives. Before the inventory is done, however, the scope must be further detailed to include the specific kind of information which will be gathered. As a minimum, this usually includes a description of the facilities and the programs available, but it may include additional information such as eligibility criteria, accessibility, availability and cost/funding.

(iv) List the resources, facilities, service/care groups to be included

At this stage the Health Council needs to develop a list of all agencies which might be included in the inventory. To do this, the Health Council should begin with lists already available. It may then wish to get additional candidates by writing various "key informants" who may be able to suggest services that were unknown to the Council.

(v) Design the survey instrument (questionnaire)

The development of a questionnaire needs careful attention. Questionnaires which have been developed in other jurisdictions can be used as models, but the Health Council should borrow with care because the field of health promotion is new and "the state of the art" not highly developed. Some examples of inventory questionnaires are included in Appendix A. Since questionnaire design is in itself a science, the Health Council may wish to seek expert assistance. Two references are provided at the end of this chapter.

(vi) Pilot-test the questionnaire

A questionnaire should always be tested to identify problems before the field study is done. As a general rule it is best to conduct this test on a group similar to the one being surveyed, but not the same individuals who will complete the actual inventory survey.

(vii) Conduct the Inventory Survey

The actual implementation of the survey can be done in several ways, such as mail, telephone, personal interview, or a combination of these. Table 4.1 presents a summary of some of the characteristics of each and, again, further references are provided at the end of this chapter. As information is being returned, it must be scrutinized for completeness and clarity.

Table 4.1 - Characteristics of Some Information Collection Techniques

Rank	Cost	Data Collection Time	Quality of Data	Flexibility to Vary Questions	Length of Contact With Informant
Highest	Face-to-Face	Face-to-Face	Face-to-Face	Face-to-Face	Face-to-Face
↓	Telephone	Mail	Mail	Mail	Telephone
Lowest	Mail	Telephone	Telephone	Telephone	Mail

(viii) Organization and Presentation of Inventory Information

The organization and presentation of the information is probably the most difficult step in the inventory process, because the alternatives are almost limitless. Fortunately, Health Councils have now had considerable experience with the inventory process in general, and some agreement about preferred methods is now emerging. For example, there seems to be a general acknowledgement that it is better to organize the data by programs rather than agencies. This means, for example, that a Health Council can quickly determine which agencies offer a specific service, such as smoking cessation.

Apart from the service orientation, however, much remains to be learned about organizing and presenting health promotion data. In accordance with the decision tree presented in Chapter 2, for example, the inventory could be organized according to the nature of the intervention; the scope of the intervention, the target group, or a combination of these. It must be noted, however, that the development of categories is arbitrary and there will likely be some overlap regardless of which form of organization is chosen.

The Niagara District Health Council structured its inventory according to the nature of the intervention. Table 4.2 shows the categories of activities and services which were used to classify health promotion services in Niagara. Table 4.3 illustrates how health promotion services might be organized according to the scope of intervention, with a further breakdown according to age. Classifying health promotion services according to target population might result in grouping all programs directed towards perinatal care, children, adolescents, adults, senior citizens, for example.

These approaches may be combined in the form of a matrix which has been used by several District Health Councils to present inventory data related to other areas of health care. Figure 4.1 provides an example of what a matrix organization of health promotion services might look like. Collecting and organizing inventory information in this way allows the Health Council the flexibility of looking at, for example, all services available for one particular target group; all services aimed at lifestyle, regardless of target group; all services oriented towards health enhancement; or a sub-group of information, such as services to enhance the health of seniors through lifestyle intervention.

Once the information for an inventory has been gathered, there are advantages to publishing it in the form of a directory. With wide circulation, an up to date directory would play an invaluable role in connecting members of the general public with the services that they would benefit from, but are unaware of. By merely producing a directory, the Health Council will do much to stimulate community interest in health promotion.

Table 4.2

Suggested Categories of Health Promotion and Disease Prevention Activities and Services

Health Promotion

- Addiction Awareness
    - Alcohol
    - Drugs (e.g. prescription non-prescription)
    - Tobacco
- Communicable Disease Awareness
    - Sexually Transmitted Disease
    - Tuberculosis
    - Infectious Hepatitis
- Dental Health Awareness
- Family Planning
- Family and Social Skills
- Genetic Awareness
- Immunization Awareness
- Mental Health Awareness (e.g., stress management, self-assertiveness, self-esteem)
- Nutrition Awareness
- Physical Fitness
- Recreation/Social Activities
- Sexuality Education
- Weight Awareness
- General Disease Awareness
- General Life Style/Health Awareness

Disease Prevention

- Birth Control
- Dental Health
    - Fluoride Programs
    - Brush-ins
    - Flossing
- Detection of Specific Disease
    - Cancer
    - Diabetes
    - Heart Disease
    - Hypertension
    - Kidney Disease
    - Lung Disease
- Foot Care
- Genetics
    - Genetic Screening
    - Genetic Counselling
- Hearing/Vision Screening
- Immunization
- Infant Development
    - Infant Stimulation
    - Infant Screening
- Mental Health
- Neonatal Screening
    - P.K.U.
    - Hypothyroidism
- Parenting
    - Communication Skills
    - Child Abuse
- Poison Prevention
- Pregnancy/Prenatal
    - Nutrition
    - Childbirth
- Smoking Cessation
- Substance Abuse
    - Alcohol
    - Drugs (e.g., prescription, non-prescription)
- Weight Control

Source: Niagara District Health Council. Health Promotion and Disease Prevention in Niagara Today. 1982.

Table 4.3

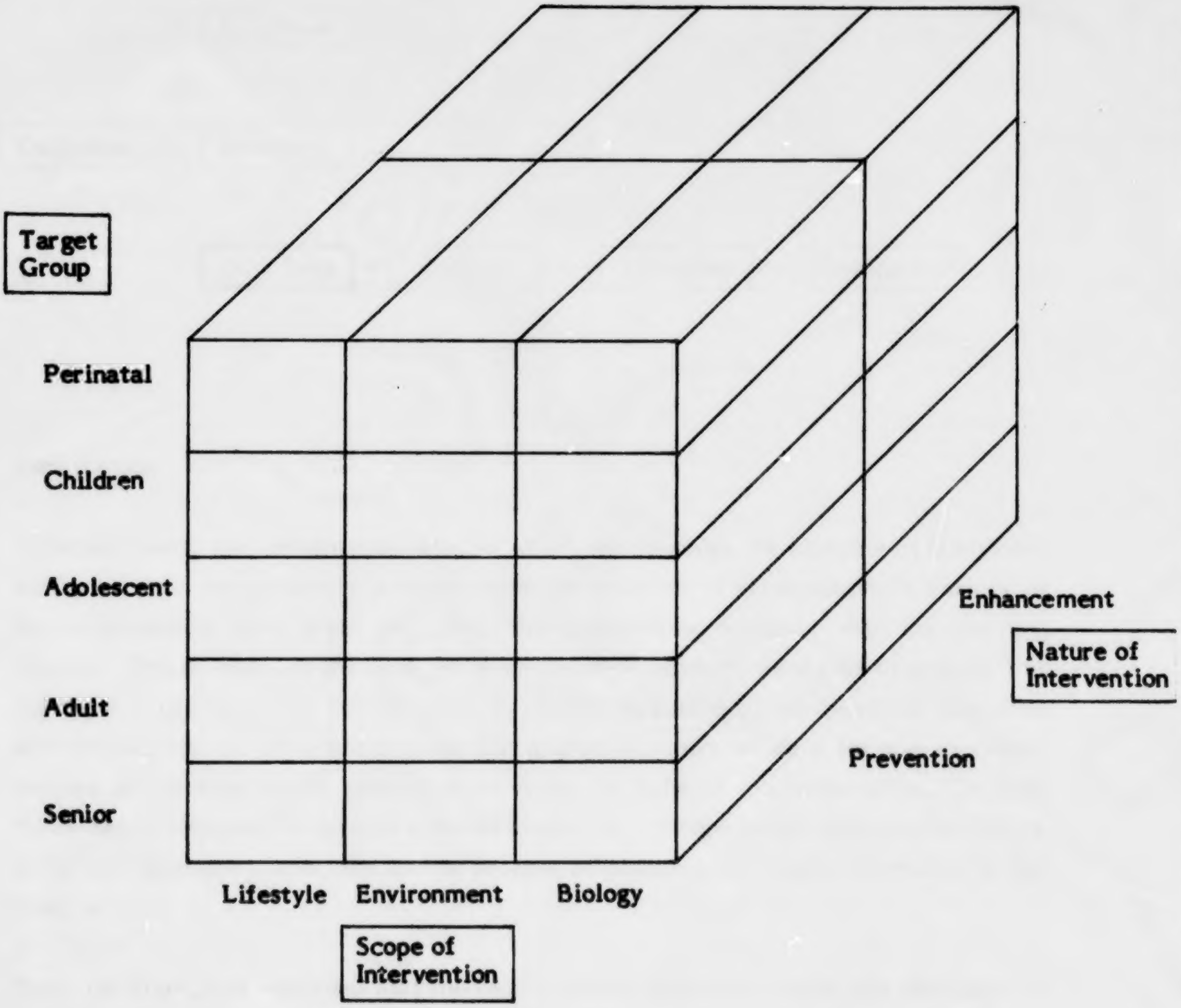
Classification of Items to Enhance Health and Prevent Disease By Scope of Intervention and Age

Age	Lifestyle	Environment	Biology
1 year	DIET - Adequate rather than over-nutrition stressed	ENVIRONMENT - Free of Rubella infection, Smoking, X-Ray, Alcohol and Medication - A nurturing environment	IMMUNITY from Diptheria, Measles, Mumps, Pertussis, Polio, Tetanus
1 - 5 years	DIET - Increased fibre, decreased sugar - Exercise	- Nurturing and stimulating environment - Use of seat restraints in automobiles - Use of kid-proof bottles and containers for meds and toxic substances - Adequate/Alternative high quality supervision if parent unavailable - Fluoridation of drinking water	- Maintain adequate immunity
5 - 12 years	DIET - Decreased sugar, fat intake - Exercise - Smoking/Alcohol prevention	- Adequate restraints in automobiles - Protective equipment for sports and recreational activities - Adequate/Alternate supervision - Fluoridation of drinking water	- Immunity maintained
13 - 19 years	DIET - Control obesity - Encouragement of physical activity - Control of sexually transmitted diseases and family planning - Smoking prevention/ cessation - Alcohol consumption	- Use of seatbelts/ restraints in autos - Use of adequate equipment for other motorized vehicles (helmets) - Equipment for sports and recreation activities - Equipment for sports and recreation activities - Road and car design	- Immunity from communicable disease maintained

Age	Lifestyle	Environment	Biology
20 - 35 years	DIET - fat reduced, sugar reduced, fibre increased - Regular moderate activity - Control of sexually transmitted disease and family planning - Smoking cessation - Alcohol moderation - Stress management	- Seatbelt use - Speed restriction enforcement - Environment (workplace and community) free from carcinogenic agents	- Genetic counselling
36 - 65 years	- Nutritionally balanced diet - Weight control - Smoking cessation/ reduction - Alcohol consumption control - Physical activity - Stress management	- Control of workplace pollutants - Control of air pollutants (auto exhaust, industrial waste) - Seatbelts use - Speed reduction on highway	- Genetic counselling
66 + years	- Nutritionally balanced diet - Smoking cessation/ reduction - Physical activity - Alcohol consumption control - Stress management	- Maintaining social contact - Adequate supervision of meds - Engineering surrounding environment to facilitate independence (furniture and stairwell construction) - Control of air contaminants	- Immunization for communicable disease 1) influenza 2) pneumococcal pneumonia

Figure 4.1

Example of a Matrix Organization of Health Promotion Services


Target Group
Perinatal
Children
Adolescent
Adult
Senior
Lifestyle
Environment
Biology
Scope of Intervention
Enhancement
Nature of Intervention
Prevention

REFERENCES

1. District Health Councils Research Program. Conducting Inventories: A Guide for Health Councils, 1983.

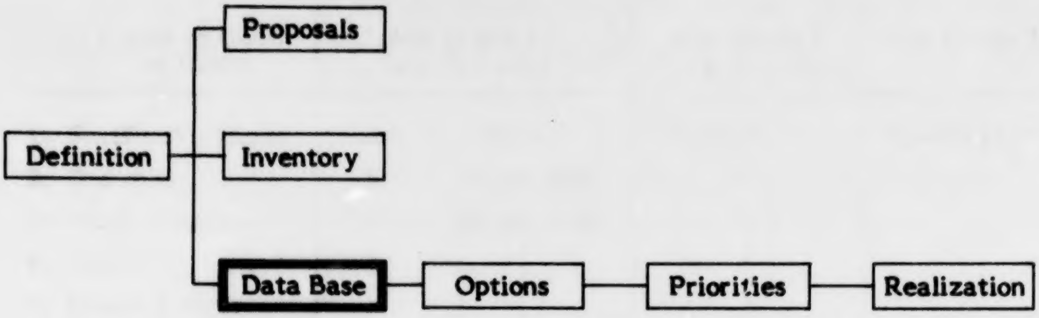
2. Niagara District Health Council. Health Promotion and Disease Prevention in Niagara Today, 1982.

ADDITIONAL READINGS

1. Woodward, C., et al. Guide to Improved Data Collection in Health & Health Care Surveys. Ottawa: Canadian Public Health Association, 1982.

2. Oppenheim, A. Questionnaire Design & Attitude Measurement. New York: Basic Books, 1966.

CHAPTER 5 - THE DEVELOPMENT OF A DATA BASE FOR PLANNING



Introduction

In recent years, the conventional wisdom which accompanies the planning of health and social services has generally acknowledged the benefits of accumulating a variety of statistics into a "data base" and using this information to assist with the planning process. The members of the Task Force on Health Promotion were able to endorse this approach in principle, but quickly came to realize that little (if anything) has been done with respect to the systematic collection and organization of data for the expressed purpose of planning health promotion services. In light of this observation, the Task Force has undertaken to develop a model system by which relevant information can be collected, organized, and used in the process of planning for health promotion at the local level.

From the start, it is conceded that the recommended data base will be less than ideal as a statistical planning tool, and is bound by a number of constraints which will weaken its outputs. Nevertheless, the model represents a considered approach to the problem of using imperfect statistics for the planning of health promotion services, a part of the health field that has been largely ignored by planners to date. It is anticipated that use of the data base will enhance the quality of contemporary health promotion plans which are developed by District Health Councils and, at the same time, will establish a plateau from which future refinements in the gathering and use of data can evolve.

In conceptualizing a health promotion data base, it is necessary to begin by envisioning how the statistical information will be employed - its functional application must be defined, in other words. For this task, the Well-Ill Continuum, which was introduced in Chapter 2 to assist with the definition of health promotion, can be of further benefit. The Continuum describes six categories of health status as follows:

Figure 5.1: The Well-Ill Continuum

	Well			Ill	
Optimal Health	At Low Risk	At Risk	Signs & Symptoms	Disease & Disability	Death

A principal goal for health promotion is to reduce the rate of transition from the well side to the ill side of the continuum. By reducing this flow, the incidence (or number of new cases) of illness will be lowered. In this light, a good starting point would be to examine existing rates for illness (and death) in order to identify target areas for which change in the rate of incidence is desirable.

Clearly, the rates for all causes of disease, disability, and premature death cannot be influenced by health promotion initiatives. Accordingly, it would be desirable, from a planning perspective, to have a list of all preventable causes of disease, disability, and premature death, as they occur in the local community. This list would represent the range of potential targets for health promotion programs and services in the local jurisdiction. Thus, the Task Force has identified the first step in planning a data base as being the development of such a list. Its purpose is to describe the rates for all preventable disease, disability, and premature death as they occur in the local community. The value of the list will be further enhanced if it is broken down by sex and by age groups. Figure 5.2 illustrates how such a list might appear.

Figure 5.2: Format for a List of Preventable Illness and Death

District: Sex: Males ☐ or Females ☐

Cause of Death or Illness	Age Group 1 (e.g. 0-2 yrs.)		Age Group 2 (e.g. 3-11 yrs.)	Age Group 3
1. Traffic Accidents	Rank /	Rate	Rank/Rate	Rank/Rate
2. Drowning	4	50 per 1000	"	"
3. Heart Attack	1	82 per 1000	"	"
4. Stroke			"	"
5. Breast Cancer			"	"
6. ↓	↓	↓		

Beyond the list of preventable illness and death, there is a second set of information that can be useful in planning for health promotion. It is derived from the "At Risk" category of the Well-Ill Continuum. Again, from Chapter 2 it will be recalled that "At Risk" status can be defined by behavior (or "lifestyle"), by environmental conditions, and by human biological conditions. From the planning perspective, it is desirable to know something about the aggregate status of the community in each of these areas. Ideally, this would entail the collection of information to describe the nature and extent of a broad range of risk correlates (that is, which types of risk occur in the local community and how many people are affected by each?).

The range of risk correlates to be examined can be derived from the list of preventable illness and death through a review of the literature. Accordingly, the measurement of these correlates can be assumed to approximate or preduct the state of community health. For example, if "failure to wear a seatbelt" were accepted as a risk behavior, it would be expected that a community in which 10% of the drivers wore seatbelts would experience higher rates for injury and death from accidents than would a community with 90% compliance.

If risk status and illness are correlated, it might well be asked why both should be measured. There are three principal reasons:

1. The statistics that are kept on rates for death and illness are quite extensive, so that a picture of the state of community health can be gained with relative ease.

2. Fewer measurements exist of risk status, making this information difficult to secure. When measures of risk can be obtained, they enable planners to anticipate the future state of community health, providing aglimpse which can sometimes be of more use in planning than a view of the present. Thus, they are beneficial adjuncts to the planning process, but are incomplete.
3. The information from each type of measurement is likely to have problems with its accuracy, so that the picture it presents will be less than perfect. In such a case, using both types of information will provide additional validity to any planning conclusions that must be drawn regardless of limitations in the data.

For these reasons, it is suggested that a health promotion data base should draw from both measures of illness and measures of risk status to whatever extent is possible. The present chapter is intended to give assistance with locating this information and organizing it in a useful manner.

A Note on Health Enhancement

Chapter 2 suggests that the broader field of health promotion can consist of two related functions: health enhancement and disease prevention. The data base which is described in this section, however, is clearly oriented towards the disease prevention function and its attendant focus on risk status. It must also be asked, however, whether corresponding sets of information can be generated upon which health enhancement programs and services can be planned. Chapter 2 suggests that health enhancement endeavours are aimed at target groups whose health status is "low risk" and is intended to move them towards some optimal or ideal level of health.

In the opinion of the Task Force members, it is probably neither possible nor necessary to develop a health enhancement data base. To a large extent, this is because the use of health enhancement programs and services is a personal decision that is made by people in a relatively healthy state. These people will elect to attend yoga classes, for example, because they wish to increase the extent to which they enjoy their lives and feel satisfied. They do not attend as a means of coping with high levels of negative stress, and thereby reducing their levels of risk (although the techniques that they learn could be used to accommodate such stress, should it appear in the future).

The fundamental difference between enhancement and prevention appears to be related to the underlying motivation or purpose. For health enhancement, the motivation is oriented towards getting more out of life by seeking a better state of health, whereas for prevention it is to reduce the likelihood of impaired health. As such, people do not have "needs" for health enhancement services, in the traditional sense, as much as they express personal preferences or desires for them. They create a consumer demand for them. This observation is reinforced by the observation that the majority of health enhancement services have adopted a user-pay format, in both the public and private sectors. Accordingly, the supply of such services is notably responsive to consumer demand and, because the costs are covered by the user, are capable of extensive expansion when the market so permits.

Insofar as this description of health enhancement services is accurate, there is little call for systematic planning by District Health Councils. People who wish such services will create a demand and will provide the necessary resources to sustain them. The continuing satisfaction of consumers will support these services indefinitely, whereas consumer dissatisfaction will eventually result in a withdrawal of support.

Measuring Illness in the Community

When referring to "illness", the entire right-hand side of the Well-Ill Continuum is included, and involves two principal measures from a health promotion perspective:

1. the frequency and the causes of premature and preventable death in the local community;
2. the frequency and the causes of preventable disease and disability in the local community.

There will, of course, be a substantial area of overlap in the two measurements because many preventable deaths are preceded by a period of related disease or disability. In order to accommodate the overlap, both measurements can be synthesized into a single integrated list of preventable disease, disability, and premature death.

It should be noted that the concern with the death rates deals with premature deaths rather than all deaths. It is important to acknowledge that health promotion does not have as its goal the elimination of death. Although this may seem like an obvious statement, it addresses a criticism that is sometimes aimed at the field. A more accurate statement of the role of health promotion is to reduce the incidence of premature death - those which were unnecessary in the sense that, had timely changes been made in lifestyle, environmental conditions, or human biology, they would have been less likely to occur.

Another issue to be addressed involves the concept of preventability. Few interventions can guarantee a preventive action for every individual reach. Rather, it is necessary to focus attention upon the likelihood or probability of experiencing illness at the community or aggregate level. This position is consistent with what is generally known as the Public Health Perspective. It suggests that changes can be introduced into the community which will decrease the probability that specific health problems will occur. The change or "intervention" would manifest itself by affecting the rate of incidence (that is, the number of new cases) for that problem over time. It does not mean that every person who adopts the change or is otherwise affected by it will have guaranteed insulation. It does mean, however, that one thousand people in a community who are affected by an intervention will likely have a lower rate of incidence for a specific disease or disability than one thousand who are not, all other things being equal.

In this context, the concept of preventability is related to probable effects on the aggregate population. When the spread of illness is studied by epidemiologists, various correlates are uncovered which separate those who experience illness from those who are not. These correlates are very often characteristics of lifestyle, environment, or human biology. When these characteristics are modified in experimental or demonstration situations, the probability of the associated illness occurring is sometimes found to be lowered. That is, the rate at which new cases develop is found to be reduced. Thus, a preventive intervention is developed.

The manipulation of one characteristic, or even a small group of characteristics can have a varied effect on the related incidence rate. In some cases (various forms of immunization, for example), the effects are quite dramatic and the probability of a preventive effect is quite high. In others, the magnitude of the positive impact will be lower, as is the case with many initiatives which seek to change lifestyle behavior. Nevertheless, whenever a depressing effect on the rate of incidence is present, prevention is occurring to some extent. It is important to see prevention from a relative perspective rather than from an absolute one.

In terms of defining preventability, then, one must ask whether any risk correlates (lifestyle, environment, or human biology) have been identified which, when modified, are likely to lower the rate of incidence for a given form of disease, disability, or premature death. Should they exist, the condition can be considered to be preventable to some extent. The relative impact of various interventions[1] will be different, and a judgment will have to be made regarding the effort required to implement each in relation to its anticipated public health returns. Assessing the value of interventions is more fully discussed in Chapters 6 and 7 of this Guide.

With the foregoing considerations in mind, the District Health Council must endeavour to measure the frequency and the causes of preventable disease, disability, and death in its area of jurisdiction in order to develop data base for planning. Of these measurements, those which record death (or mortality) are most accessible. Measurements of disease and disability are less readily available and are organized in ways which are difficuit to incorporate into a health promotion data base. The following sections discuss the availability and methods for organizing each.

Mortality Statistics

Mortality statistics (or "data") are based on a count of the number of deaths in a population. There are several ways in which they can be presented, including the absolute number of deaths, the crude mortality rate, age and sex specific mortality rates, age-adjusted mortality rates, life expectancy, and potential years of life lost.

The crude death rate is the total number of deaths in a given year per 1,000 population and is not broken down by age or sex. Age and sex specific mortality rates are calculated separately for each age and sex grouping. The age-adjusted mortality rate is similar to the crude mortality rate in that it is a single rate for the entire population, but is adjusted so that age differences in distribution of the population do not affect the rate. The age-adjusted mortality rate may be used as a single indicator in place of age and sex specific rates.

Life expectancy figures indicate the average life expectancy for males or females at a certain age (average number of years remaining). Although most commonly quoted life expectancy figures are at birth or one year of age, these figures are calculated for every age. The "potential years of life lost" are usually calculated as the number of years lost from premature death between the ages of 1 and 70 relative to expected lifespans.

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[1] Here the term intervention is used in a generic sense to describe any initiative that is intended to modify one or more risk correlates among members of a target group.

The absolute number of deaths, the crude mortality rate, the age/sex specific mortality rates, and the potential years of life lost are frequently tabulated in relation to the cause of death.

In addition, infant, neonatal and perinatal death rates are tabulated. Infant deaths include all deaths of children under one year of age and are calculated per 1,000 live births (instead of 1,000 population). Neonatal deaths include all deaths that occur before twenty-eight days of age and are calculated per 1,000 live births. Perinatal deaths are a combination of fetal deaths and neonatal deaths, but the precise definitions vary from one jurisdiction to another.

Mortality data for a given district can be used by themselves - the causes of death can be ranked for various age groups and by sex. Tables 5.1 and 5.2 at the end of this chapter, provide examples of how this information can be presented. Although they are from an Ontario wide perspective, similar tables can be developed for the local health planning district.

In addition to knowing the major causes of death by age group and by sex, it can be of advantage to compare local rates[2] with those from other jurisdictions in order to identify anomolies. Anomolies can provide clues as to where special health promotion attention might be required by identifying a particular vulnerability in the local area.

An advantage of using mortality data is that they are virtually complete - few deaths go unrecorded. In addition, the recorded age at the time of death can be considered to be very accurate. There are a number of limitations, however, which do affect the accuracy or the comprehensiveness of the causes of death as listed on death certificates. A number of studies have suggested that certain diseases or conditions are seldom recorded as the cause of death, even if there is a reasonable basis for believing that they contributed to it. Diabetes, hypertension, pneumonia, and suicide all tend to be under-reported. In other cases, the immediate cause of death might be recorded, but the underlying or contributing causes might not. As an example, an individual might have been drinking heavily (or have been an alcoholic) and died in a motor vehicle crash, but the cause of death could well be listed as multiple head wounds. This example illustrates how mortality data might result in erroneous conclusions being drawn when applied to health promotion planning.

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[2] Here, "rates" refer to standardized expressions of the mortality measures -these are expressed in such forms as "25 deaths per 1000 population". When the statistics are standardized in this manner, they can be compared with other jurisdictions whose population size may be larger or smaller.

Nevertheless, mortality statistics will represent an important input in the development of a health promotion data base. Due to their limitations, however, it is wise to augment them with other measures so that planning decisions suffer from as little distortion as possible.

Sources for mortality statistics are listed in Appendix B at the end of the Guide.

Morbidity Statistics

Morbidity statistics are intended to measure the frequency and the causes of disease and disability. They may measure the number of new cases (incidence), the number of cases at a particular time (prevalence), or they may incorporate both. They may also measure the duration of the disease or disability in a number of ways.

The most common forms for morbidity data are:

1. The number of cases diagnosed;
2. The number of days of hospital care;
3. Registers for diseases that require official notification.

Diagnoses and "days of hospital care" statistics are primarily based on separations (or discharges) from hospitals or treatment units. These, in turn, are categorized as "acute care", "rehabilitation", or "psychiatric care". There are several diseases for which an official notification is required - sexually transmitted diseases, tuberculosis, and other communicable diseases (such as measles) are examples.

Morbidity data can be compiled into tables in much the same manner as their mortality counterparts. They can be used by themselves as tables which are broken down by sex and by age group. In this form, the leading causes of illness can be identified and ranked on the basis of the number of individuals affected.

Alternately, morbidity data can be compared over time in order to identify trends - this will show which rates are stable, which are declining, and which are increasing. A third option is to compare rates among jurisdictions in order to identify anomolies that are peculiar to a specific area and may require special attention.

Morbidity statistics must be used in the planning process with caution as they have a number of limitations. The most obvious is that they are not exhaustive - there are many forms of disease and disability which do not come to the attention of the treatment/rehabilitation system and, as a consequence, are not recorded in its statistics. Of these, many are dealt with by family physicians and are not currently recorded in any way that can be incorporated into measures of illness levels in a community.

In addition, those statistics which do exist as measures of illness suffer from problems of exhaustiveness and accuracy. Diagnostic information which is drawn from hospital or medical records can be subject to the same problems as mortality data - that is, they may not reflect associated or underlying causes that are of interest to health promotion planners. In addition, they have problems distinguishing between the number of people under care and the number of "episodes" of care. Some computer files, such as those in most hospitals, will record only episodes. Accordingly, they will report one person with ten episodes in the same manner as ten people, each with one episode and, in so doing, give a false impression of the rate for that illness.

In other instances, diseases will be under-reported. This is particularly true for those such as alcoholism, which are socially undesirable. Also, less serious diseases tend to be under-reported. As a consequence, morbidity data which is drawn from medical or hospital records will tend to be over-represented by those illnesses which are severe, visible, and socially desirable or acceptable.

Another source of morbidity data can be found in the registries which are compiled by a number of agencies and organizations. Those kept by the Canadian National Institute for the Blind, the Ontario Society for Crippled Children, and the Canadian Cystic Fibrosis Foundation are relatively exhaustive. The largest registry of all is maintained by the Ontario Cancer Foundation which, despite the addition of almost 15,000 new cases in 1976, is estimated to contain only about one half the actual rate.

There is no requirement that Health Councils rely exclusively on existing statistics for their planning functions. Morbidity data can also be collected locally through surveys. While they may be more expensive than reviewing existing data, surveys can provide a much broader range of information on the frequency and causes of disease and disability in the local population. These surveys can include, for example, a health status index or a health diary. For more information on measuring health status, the reader is referred to review articles by Chambers (1982) and Verbrugge (1980). Examples of surveys are included in Appendix C. Sources for morbidity data are listed in Appendix B at the end of the Guide.

Measuring Risk Levels in the Community

As stated earlier, risk status can be viewed as a transition stage between low risk status and a state of illness. It can also be viewed as an antecedent to illness at the aggregate level: a population with a high proportion of people in a risk group (smokers, for example) are more likely to have a higher rate for certain types of illness or premature death (such as respiratory ailments or lung cancer, in this example).

In this context, it would be of predictive value to planners to know the nature and extent of various risk correlates in the community. These rates could be used to assist with the identification of health problems that are likely to engage in the community. From a programming or service delivery perspective, a description of the nature and extent of risk status in a community would suggest targets for both primary and secondary prevention programs.[3]

In its simplest form, a measurement of risk status in the local population would consist of any number of risk correlates in a column, preceded by the frequency with which each occurs. The information could be broken down by sex and by age in order to give an impression of where the risk is concentrated (this is particularly true for risk that is defined by lifestyle and human biology, but less so for risk associated with environmental conditions). In addition, the frequencies for risk measures could be expressed as rates so that differences among the sizes of age groups can be accommodated, thereby allowing for some form of comparison among groups and among districts.

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[3] As described in Chapter 2, primary prevention is aimed at low risk groups, with the purpose of inhibiting movement into risk status. Secondary prevention is aimed at risk groups with the purpose of returning them to low risk status, or, as a minimum, inhibiting the transition into a state of illness.

It is unlikely that any Ontario jurisdiction has performed a community-wide assessment of risk correlates. It is more likely, however, that various organizations and agencies within each jurisdiction will have information about a number of risk correlates as they occur in both the local and the province-wide setting. (Agencies such as the Addiction Research Foundation, generate statistics on the number of low risk and risk drinkers in all Ontario districts for example. In addition, universities often conduct community surveys examining risk status in the local population). These can be integrated into a broad picture of the local "risk profile", and can broaden and strengthen the data base upon which planning decisions will be made.

As was the case with morbidity statistics, existing measures of risk status in the local community can be augmented by the District Health Council gathering its own information, either independently or in collaboration with other community resources (such as the local Health Unit or university). Again, the most expedient way to gather this information is through a survey of the population. In addition to the health status index and health diary referred to in the section on morbidity data, the Health Council may wish to consider the health hazard appraisal or other instruments to measure risk status (see Appendix C for examples). Alternately, the local list that was drawn up from mortality and morbidity data can be used to design a survey that measures only those correlates which have local significance. Drury et al, (1982) provide a comprehensive bibliography for the identification of risk correlates.

As with all measures, the use of surveys to assess risk status in the local community is not without drawbacks. Care must be taken not to draw erroneous conclusions from the implications of the data. It must be remembered that a single risk correlate may be only one of a large number that combine to cause the rate for a particular disease or disability. If, for example, the community survey examined the frequency of seatbelt use in order to document the risk behavior and found that seatbelt use was high, the temptation might be to conclude that motor vehicle crashes were not a problem. Before this conclusion could be drawn, however, other correlates (such as impaired driving or poor highway design), would have to be measured and found to be low. In addition, they would have to be consistent with the morbidity and mortality rates for personal injury and damage from motor vehicle crashes. Should a Health Council put disproportionate emphasis on a community survey of risk correlates, a number of faulty conclusions may be reached because of hidden correlates or causes that were not measured.

A third option exists for gathering information about the risk status of the local community. It involves generating what are known as "synthetic estimates". These estimates are produced by taking information that is known about a specific risk factor (such as the type of person who is most likely to experience it) and measuring that piece of information locally. It is an inferential process that takes advantage of the availability of a large amount of existing information which describes the characteristics of the local community. For example, should the heavy consumption of alcohol be correlated with being laid off work, then a measure of the lay-off rate could be used to estimate increases in risk drinking behavior. Alternately, a province-wide survey of grade 9 students may have found that 4% are obese - this percentage can then be applied to the local grade 9 population in order to develop a synthetic estimate of the number of obese 14 - 16 year olds in the local population. Any of a great variety of characteristics may be used - age, sex, income, population density, employment, climate, environmental pollution, and ethnicity, for example. The selection of a particular variable is contingent only on establishing its relationship with risk status.

Data on local characteristics can be obtained from a number of sources, such as the local government planning department, Statistics Canada, universities, Public Health Units, Social Planning Councils, and so on. The relationship between a particular variable and the rate of illness in a population can be identified through an examination of the literature. Assistance with such a review can be requested from the local Public Health Unit or university.

The major limitation of synthetic estimates is that they make no allowance for local anomolies or circumstances. The setting of rates at the provincial level, for instance, incorporates a wide range of local variances into an average. Should the local community be one of the extreme variants, it will not be discovered through the use of synthetic estimates. For this reason, they should only be seen as general or gross indicators and used in conjunction with other measures of risk and illness.

TABLE 5.1 - CAUSES OF DEATH - ONTARIO 1980 - MALES

		Age							
		1-19		20-64		65+		Total	
Cause of Death	ICD-9 Code	(Rank)	# Deaths	(Rank)	# Deaths	(Rank)	# Deaths	(Rank)	# Deaths
I Infectious and Parasitic Diseases	1-139		10		58		81		149
II Neoplasms									
- digestive organs and peritoneum	150-159		2	(3)	819	(4)	1,489	(3)	2,310
- trachea, bronchus and lung	162			(2)	1,002	(3)	1,508	(2)	2,510
- female breast	174								
- genito-urinary organs	179-189		2		229	(7)	930	(9)	1,161
- brain	191		13		150		75		238
- leukemia	204-208	(6)	42		113		189		344
- other cancer		(8)	29	(6)	543	(10)	645	(8)	1,217
- other			3		23		33		59
III Endocine, Nutrition Metabolic Disorders & Immune Diseases									
- diabetes mellitus	250		2		133		321		456
- other		(10)	14		44		82		140
IV Diseases of Blood & Blood Forming Organs	280-289		9		22		68		99
V Mental Disorders									
- psychoses	290-299				10		108		118
- alcohol and drug dependence	303-304				99		47		146
- other			2		36		49		87

TABLE 5.1 - CAUSES OF DEATH - ONTARIO 1980 - MALES

Cause of Death	ICD-9 Code	Age							
		1-19 (Rank)	1-19 # Deaths	20-64 (Rank)	20-64 # Deaths	65+ (Rank)	65+ # Deaths	Total (Rank)	Total # Deaths
VI Diseases of Nervous System & Sense Organs	320-389	(5)	44		179		229		452
VII Diseases of Circulatory System									
- Ischaemic heart disease	410-414		1	(1)	3,476	(1)	7,958	(1)	11,435
- other heart disease			12	(10)	312	(2)	1,807	(4)	2,131
- cerebrovascular disease	430-438		8	(8)	403	(6)	979	(6)	1,390
- other			2		250	(5)	1,145	(5)	1,397
VIII Diseases of the Respiratory System									
- pneumonia	480-486	(9)	15		109	(9)	779		903
- chronic bronchitis, emphysema, asthma	490-493		4		93		397		494
- other			9		177	(8)	844	(10)	1,030
IX Diseases of the Digestive System									
- ulcer of stomach and duodenum	531-533				24		110		134
- chronic liver disease and cirrhosis	571		3	(7)	446		224		673
- other			9		152		418		579
X Diseases of Genito-urinary System	580-629		3		71		330		404

TABLE 5.1 - CAUSES OF DEATH - ONTARIO 1980 - MALES

		Age			
Cause of Death	ICD-9 Code	1-19 (Rank) # Deaths	20-64 (Rank) # Deaths	65+ (Rank) # Deaths	Total (Rank) # Deaths
XI Complications of Pregnancy & Childbirth	630-676				
XII Diseases of Skin & Subcutaneaus Tissue	680-709		3	17	20
XIII Diseases of Muscle System & Connecting Tissue	710-739	2	22	48	72
XIV Congenital Anomalies	740-759	(7) 35	42	13	90
XV Conditions of Perinatal Period	760-779	5			5
XVI Ill Defined	780-799	4	80	159	243
Supp: Accident					
- transport (motor vehicle)	E800-E848	(1) 351	(4) 818	114	(7) 1,283
- poisoning	E850-E869	8	100	14	122
- falls	E880-E888	2	108	210	320
- burns	E890-E899	7	77	38	122
- drowning	E910	(4) 49	60	9	118
- suicide	E950-E959	(3) 67	(5) 623	111	801
- other		(2) 94	(9) 350	98	542
Other					
TOTAL:		862	11,256	21,677	33,795

TABLE 5.2 - CAUSES OF DEATH - ONTARIO 1980 - FEMALES

Causes of Death	ICD-9 Code	Age 1-19 (Rank)	 1-19 # Deaths	 20-64 (Rank)	 20-64 # Deaths	 65+ (Rank)	 65+ # Deaths	 Total (Rank)	 Total # Deaths
I Infectious and Parasitic Disease	1-139		7		44		78		129
II Neoplasms									
- digestive organs & peritoneum	150-159		1	(3)	589	(3)	1,515	(3)	2,105
- trachea, bronchus and lung	162			(5)	378		389	(10)	767
- female breast	174		1	(2)	695	(8)	598	(5)	1,294
- genito-urinary organs	179-189		2	(4)	391	(7)	611	(7)	1,004
- brain	191		10		122		61		192
- leukemia	204-208	(4)	24		89		144		257
- other cancer		(9)	12	(7)	324	(10)	565	(8)	901
- other			3		18		49		70
III Endrocine, Nutrition Metabolic Disorders & Immune Diseases									
- diabetes mellitus	250		1		82		489		572
- other			7		39		112		158
IV Diseases of Blood & Blood Forming Organs	280-289		4		21		90		115
V Mental Disorders									
- psychoses	290-299				9		141		150
- alcohol and drug dependence	303-304				23		13		36
- other			4		13		56		73

TABLE 5.2 - CAUSES OF DEATH - ONTARIO 1980 - FEMALES

		Age							
		1-19		20-64		65+		Total	
Causes of Death	ICD-9 Code	(Rank)	# Deaths	(Rank)	# Deaths	(Rank)	# Deaths	(Rank)	# Deaths
VI Diseases of Nervous System & Sense Organs	320-389	(3)	35		127		219		381
VII Diseases of Circulatory System									
- Ischaemic heart disease	410-414			(1)	917	(1)	7,686	(1)	8,603
- other heart disease			10	(10)	200	(5)	944	(6)	1,154
- cerebrovascular disease	430-438		4	(6)	360	(2)	2,801	(2)	3,165
- other			3		125	(4)	1,370	(4)	1,498
VIII Diseases of the Respiratory System									
- pneumonia	480-486	(10)	11		62	(6)	793	(9)	866
- chronic bronchitis, emphysema, asthma	490-493		4		56		139		199
- other			7		77		388		472
IX Diseases of the Digestive System									
- ulcer of stomach and duodenum	531-533		1		17		111		129
- chronic liver disease and cirrhosis	571		1		190		104		295
- other			6		127	(9)	573		706
X Diseases of Genito-urinary System	580-629		2		67		287		356

TABLE 5.2 - CAUSES OF DEATH - ONTARIO 1980 - FEMALES

Causes of Death	ICD-9 Code	Age 1-19 (Rank) # Deaths	 20-64 (Rank) # Deaths	 65+ (Rank) # Deaths	 Total (Rank) # Deaths
XI Complications of Pregnancy and Childbirth	630-676		14		14
XII Diseases of Skin & Subcutaneaus Tissue	680-709		2	24	26
XIII Diseases of Muscle System and Connecting Tissue	710-739	2	30	92	124
XIV Congenital Anomalies	740-759	(2) 43	39	9	91
XV Conditions of Perinatal Period	760-779	1			1
XVI Ill Defined	780-799	5	51	210	266
Supp. Accidents					
- transport (Motor vehicle)	E800-E848	(1) 146	(9) 253	78	477
- poisoning	E850-E869	6	63	14	83
- falls	E880-E888	1	35	300	336
- burns	E890-E899	(7) 20	29	26	75
- drowning	E910	(8) 17	11	3	31
- suicide	E950-E959	(6) 21	(8) 256	43	320
- other	E950-E959	(5) 22	118	73	213
Other		1			1
TOTAL:		449	6,063	21,197	27,709

REFERENCES

1. Chambers, L. Health Program Review in Canada: Measurement of Health Status. Canadian Journal of Public Health. Vol. 73 January/February, 1982.

2. Community Health Services Branch. Statistical Report on Community Health: Ontario, 1980. Ontario Ministry of Health. 1983.

3. Drury, T., Schoenborn, C., and Eisenstadt, R. A Selected Bibliography for the Study of Health Practices. Office of Analysis and Epidemiology Program, National Centre for Health Statistics, U.S. Government. 1982.

4. Verbrugge, L. Health Diaries. Medical Care. Vol. 18, No. 1. January, 1980.

Other Readings

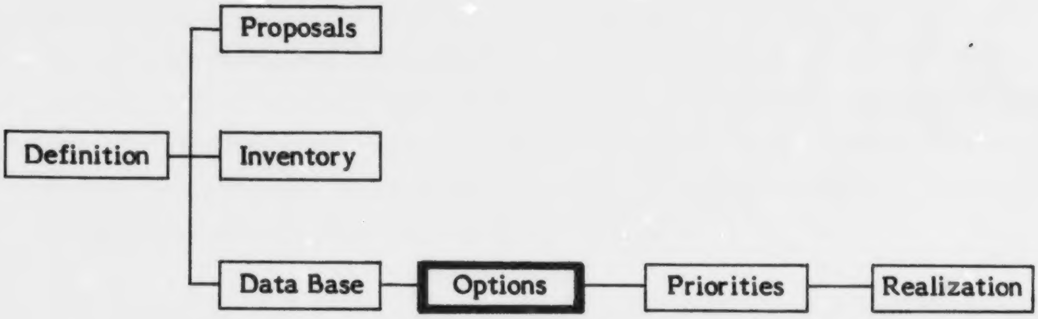
1. Canadian Task Force on the Periodic Health Examination. Periodic (vs. Annual) Health Examination. Reprinted from Canadian Medical Association Journal, Vol. 121. November 3, 1979.

2. Data Development and Evaluation Branch. Data Catalogue for District Health Councils. Ontario Ministry of Health, 1982.

3. Health Division Research and Analysis Section. Directory of Health Division Information. Statistics Canada, 1980.

4. Program Development Branch. Needs Assessment Document. Unpublished Paper. Ontario Ministry of Health, 1979.

CHAPTER 6 - SELECTING PROGRAM OPTIONS



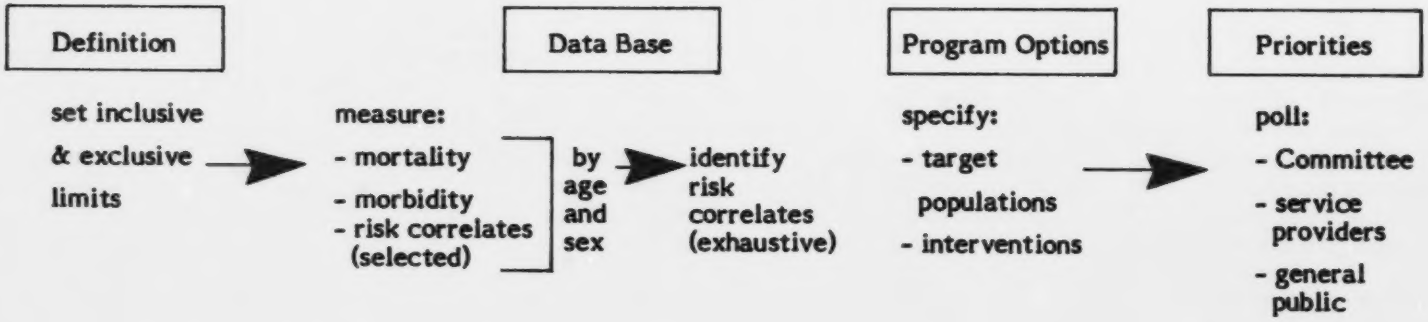
Previous chapters in the Guide have described the first two steps in the planning process. They include: selecting a definition (Chapter 2) and developing a data base (Chapter 5). The assessing of health promotion proposals (Chapter 3) and the development of an inventory of services (Chapter 4) are described as "operating functions" of the Health Promotion Committee. As such, they are continuing involvements that have a clear relationship to the health promotion plan, but are not necessary to it. They can be addressed independently from the planning process, and require only that a local definition has been selected for health promotion. For this reason, they have been depicted in the same vertical plane as the development of a data base in the diagram which illustrates the relationships among health promotion functions at the beginning of each chapter. This alignment is intended to signify that all three may be pursued simultaneously.

The basic planning process consists of four steps as it is described in the Guide. Figure 6.1 describes the steps and the principal outputs of each.

The heart of the health promotion plan would be a list of high priority program options which would be aimed at designated target populations. This, in effect, is the outcome of the fourth step in the planning process as depicted in Figure 6.1. Once the plan has been produced, the final step for the Health Promotion Committee is to encourage its

Figure 6.1

The Planning Process: Steps and Outputs


Definition
set inclusive
& exclusive
limits
Data Base
measure:
- mortality
- morbidity
- risk correlates
(selected)
by
age
and
sex
identify
risk
correlates
(exhaustive)
Program Options
specify:
- target
populations
- interventions
Priorities
poll:
- Committee
- service
providers
- general
public

adoption by community agencies and resources. This process, which has been termed "realization" is described in the final chapter of the Guide.

The purpose of the present chapter is to describe the process by which a list of program options can be generated for the local jurisdiction. Thus far, planning activities have focussed on developing a clear picture of the "problem" that is to be addressed. The problem relates to preventable illness in the community, describing it by age and by sex, and identifying the correlates which are believed to influence the related rates of incidence. In this manner, the stage is set for a response by which a favourable change in the health status of the community will be sought.

In previous chapters, the concept of change has been touched upon in general terms. Primary and secondary prevention as well as health enhancement activities have been described in terms of the target population they are aimed at and the health status goals which they are intended to achieve. These were placed in the context of the Well-Ill Continuum (refer to Chapter 2). In addition, the notion of an intervention has been introduced and discussed in Chapter 3. It is described as a change which is introduced into the existing circumstances of a particular group with the purpose of increasing the level of health that is enjoyed by group members. From the health promotion perspective, an intervention is directed towards a risk correlate and, by modifying among members of target groups, will increase the probability of lowering the rate of incidence for a particular illness. This is a fundamental assumption in health promotion.

The theoretical relationships between interventions and health status are shown in Figure 6.2.

The present chapter introduces the concept of a program option. It is related to an intervention, but introduces greater specificity concerning both what will be done and what the target group will be.

An example which uses lung cancer as the preventable disease can illustrate the concept of program option. From the data base, it is likely that smoking would have been identified as a principal risk correlate for lung cancer. Two logical interventions which could then be identified would be to:

- reduce the frequency of smoking in the population; and
- develop less hazardous cigarettes.

Figure 6.2

Target Groups and Effects of Interventions

Type of Strategy	Health Enhancement		Disease Prevention	
			Primary Prevention	Secondary Prevention
Effect of Intervention	- maintains Optimal Health	- attempts to move target group towards Optimal Health	- prevents target group from moving towards state of At Risk	- prevents target group from moving towards state of Signs and Symptoms - attempts to move target group towards state of Healthy/Low Risk
Status of Target Group	Optimal Health	Healthy/Low Risk	Healthy/Low Risk	At Risk

With respect to the former, a primary prevention intervention would be to reduce the rate at which current non-smokers adopt the behavior. From a secondary prevention perspective, interventions would include increasing the frequency with which people quit smoking, and increasing the frequency and extent to which smokers cut back their levels of intake. Other interventions consistent with secondary prevention might be to promote the substitution of the less hazardous cigarette among smokers (should such cigarettes be developed), or to promote less hazardous uses of tobacco (should they be identified).

The subsequent task of developing program options would entail the identification of the most important target populations, matching them with an intervention, and providing some reference to the desired outcome. Accordingly, the following represents a list of program options which might be generated by a planning committee to address the risk correlate of smoking:

1. Provide classroom learning modules to reduce the frequency with which students in grades 7 and 8 begin to smoke.

2. Provide a public education campaign to encourage young adults to quit smoking and to offer information about community resources.

3. Develop cessation clinics for adults.

4. Develop cessation clinics for adolescents.

5. Increase law enforcement activities to cut down the sales of tobacco to people under 16 years of age.

6. Develop local by-laws prohibiting smoking in public places.

7. Lobby with the provincial government or other funding sources for research funds to be spent in the development of less hazardous forms of tobacco or nicotine use.

8. Lobby with the provincial or federal government for higher tobacco taxes.

This list is neither comprehensive nor is it endorsed as containing the best possible set of program options. It is intended to illustrate the range of options which can be generated in response to a single risk correlate. Each program option that the planning committee decides to endorse should, by definition, be of demonstrated or likely effectiveness. It is foolhardy to recommend establishing a program for which there is little or no evidence that it will have impact on the risk correlate. Although the effectiveness statement criterion might seem obvious, it is often ignored in practice. The planning committee will undoubtedly encounter pressure at one time or another to adopt or endorse options for which there is no convincing evidence that the level of risk will be affected in any way.

The reader will notice that some of the illustrative program options involve modifications to the environment. In order to avoid confusion in this area, the members of the planning committee will want to recall from Chapter 2 that environmental conditions can play either a direct or an indirect role with respect to risk correlates. In some instances, as is the case with air pollution, the environment places a direct risk upon the health of all those who are exposed to it. In others, the environment will either promote or inhibit the adoption of a specific risk behaviour, and thus will have an indirect influence on levels of health.

In the list of illustrative program options, raising taxes and increasing enforcement will place environmental barriers to the adoption or maintenance of a smoking habit. As such, they are indirect environmental influences aimed at a risk behaviour. A municipal smoking by-law, on the other hand, appears to demonstrate both direct (reduce the frequency of second-hand smoke inhalation) and indirect (reduce the frequency of smoking behaviour) influences.

In addition to ensuring that program options are likely to have some measure of effectiveness and that they are appropriately classified, the planning committee will need to be assured that each option is a realistic or feasible endeavour in the local jurisdiction. As a result of feasibility considerations, some program options might have to be modified or eliminated even though they can be defended on logical or empirical grounds. These considerations could apply, for example, in an area which is economically dependent on a highly-polluting industry, or which relies heavily on tobacco production. At a more fundamental level, it might be found that a certain disease is highly associated with economic class (as has been the case with certain respiratory diseases in at least one study). In such a case, the planning committee would have to consider whether any action could realistically be undertaken at the local level.

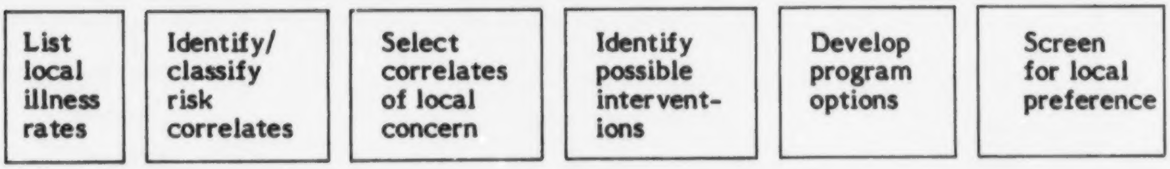
The program option, then, represents specific action that can be taken in order to modify a specific risk correlate. Table 6.1 (at the end of this chapter) identifies eighteen diseases or health problems and a number of risk correlates for each. Column 3 in the table suggests areas from which program options might be drawn. It is intended as the starting point for deliberations, and should not be considered to be comprehensive.

A Process for the Development of Program Options

There is no established practice for transforming a list, documenting the nature and extent of preventable disease, disability, and premature death into a list of appropriate program options. Accordingly, the Task Force has developed a sequence for this transformation, and offers suggestions about how each step in the sequence might be managed. Figure 6.3 depicts the entire sequence, which is then described in the text below. Table 6.3 (at the end of the chapter) provides a program option work sheet which can be used by the local planning committee to work through the sequence.

Figure 6.3

The Development of Program Options


List local illness rates
Identify/ classify risk correlates
Select correlates of local concern
Identify possible intervent-ions
Develop program options
Screen for local preference

Step 1 - List local illness rates

The first step is actually the output of the data base, as is a large part of the second step. It is concerned with the ordering of information about the nature and extent of disease, disability, and premature mortality in the local community. These should be organized by sex and by age groupings which the planning committee has selected. In addition, the rank of the illness in terms of mortality and morbidity rates can be recorded. If any other measures were developed (such as "Potential Years of Life Lost" - PYLL) the rank according to these measures can also be recorded.[1]

If the planning group wishes, an overall ranking score can be computed for each illness, either by a straight averaging of the mortality, morbidity and PYLL scores, or by weighting one or two of them more heavily and then computing an average. The advantage of computing an overall rank is that it provides a single measure of relative seriousness which has been derived from objective information. While there are weaknesses to this measure, (and there should be other measures which are given consideration), it remains a valuable piece of information that can benefit the decision-making process. It can, for example, lend a perspective which is able to moderate the attention normally given to highly visible issues which, while having immediate emotional impact, may not represent as serious a threat to the health of the community as less publicized issues.

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[1] Table 6.2 at the end of this chapter illustrates how PYLL information can be presented. These statistics are able to neutralize a bias in mortality rates which results in an over-representation of diseases among the elderly.

Figure 6.4 suggests how the first step might be organized.

Figure 6.4
Step 1: Organizing Health Data (Example)

Disease/Disability/ Premature Death	Morbidity Rank Mortality Rank ⧅ and PYLL Rank						
	Sex	0-14	15-44	45-64	65+	PYLL	Overall Rank
1. Ischemic Heart Disease	M						
	F						
2. Motor Vehicle Accident	M						
	F						

Step 2 - Identify and classify risk correlates

The second step in developing program options involves the identification of risk correlates and classifying them according to the strength of their association with the illness. Risk correlates can be identified through a review of the literature. Table 6.1, (see page 77) identifies a number of correlates for eighteen causes of illness which are considered preventable to some extent.

Once a list of correlates has been identified for a specific illness, the strength of the association for each can be judged as high, medium, or low. Clearly, this type of classification is crude and, to an extent, arbitrary. Nevertheless, it can be of some assistance in that it suggests which risk correlates should receive the greatest amount of attention, all other things being equal. In addition, there is a secondary assumption that the likelihood of achieving a successful outcome is increased if the more powerful correlates are addressed, rather than the less powerful ones. To prevent ischemic heart disease, for example, it would seem wiser to develop programs which attempt to modify serum cholesteral levels and smoking (high strength association) rather than ones which attempt to reduce obesity (medium-strength association). It must be remembered, however, that these assumptions are general and might not apply in certain instances.

Figure 6.5 illustrates a range of risk correlates which might be identified for the two examples that were introduced in Figure 6.4, Ischemic Heart Disease and Motor Vehicle Accidents.

Figure 6.5
Examples of Risk Correlates and Classifications

Disease/Disability Premature Death	Mortality Morbidity & PYLL	Associated Risk Correlates	Strength of Association H-M-L
1. Ischemic Heart Disease		high blood pressure	High
		cigarette smoking	High
		high serum cholesterol	High
		family history	High
		obesity	Medium
		physical inactivity	Medium
2. Motor Vehicle Accidents		alcohol consumption	High
		non-use of seatbelt	High
		non-use of child restraints	High
		poor highway design	Medium
		poor enforcement	Medium
		speeding	Medium
		stress	Low

Step 3 - Select correlates of local concern

An extensive list of risk correlates will result from the second step. The planning committee will undoubtedly wish to pare it down to a more manageable size. This can be accomplished by selecting from the list of risk correlates those which, in the opinion of the committee members, are of local importance and concern.

If the Health Council has performed a survey to determine the extent to which risk correlates occur in the community (as described in Chapter 5), the results can be incorporated into the decision-making process. Similarly, other information about local rates for risk correlates, such as the rates for risk behaviour that are compiled by a number of health agencies, can be considered. In both cases, anomolies and the most frequently recorded correlates could be identified for special attention. For example, if the smoking rate among adolescents is higher than the provincial average, it would warrant special attention. Similarly, if the community survey indicates that the highest reported risk behaviour is a failure to wear seat belts, then it too would warrant special attention.

The selection of those correlates which are of local interest and concern should also reflect an appreciation of local capabilities and interests. In many instances, these judgments will require an appreciation of the general orientation of both the health care network and the general public. These perceptions can be incorporated into the deliberations of the planning committee along with the information about the strength of association and the results of community surveys.

The output, a vetted list of risk correlates, will in effect represent the best judgment of the planning committee about which types of risk should receive attention at the local level.

Step 4 - Identify possible interventions

With each of the risk correlates that remains after Step 3, the transition must be made towards the formulation of a response. In so doing, the focus of the planning process shifts from defining the "problem" to defining the "solution".

The first part of the transition is to identify a list of interventions which are appropriate responses to each risk correlate. These, as stated earlier in the chapter, will be aligned with the basic goals which have been articulated for primary and secondary prevention and for health enhancement.

A tool that can be used to assist with the conceptualization of interventions is the epidemiological model, with its three fundamental components: agent, host, and environment. For each risk correlate, the planning committee can ask whether anything can be done, within primary and secondary prevention strategies, to the agent, the host, or the environment. Illustrations in the area of primary prevention can be drawn from the smoking example used earlier in this chapter. They would include the production of safer cigarettes (agent), the delivery of "don't start" programs to non-smokers (host), and the establishment of anti-smoking by-laws (environment). The same line of questioning would be applied to develop interventions consistent with secondary prevention strategies and, wherever applicable, to health enhancement strategies.

Step 5 - Develop program options

The next step in the transition from "problems" to "solutions" is to expand each of the identified interventions into a set of program options, the details for which have been provided earlier in this chapter. The output will be a wide range of programs which are considered to be reasonably effective and which can be aimed at important target groups related to each risk correlate.

Step 6 - Screen for local preference

The final step in preparing the list of program options is to screen the list in order to identify those which are most feasible locally. This process has also been elaborated earlier in the chapter. As a result of the screening, the Health Council will have a list of program options which are relevant to the nature and extent of illness in the community and which are compatible with community preferences for responses.

Conclusions

Ideally, the list of program options will represent the range of health promotion programs that the community both needs and wants. Each option will be appropriately targeted and will have good potential for impact on the risk correlate. This is vital information from which the planning committee will derive its health promotion plan. Its major drawback for planning purposes will likely be that there are far more program options than there are resources in the community to implement them. For this reason, the list of options, each of which would be a worthwhile contribution to community health, will have to again be ranked into an overall priority list. The final task of setting these priorities is addressed in Chapter 7.

Table 6.1 - Major Health Problems and Risk Correlates

Major Disease or Health Problem	Risk Corelate	Areas for the Development of Program Options
Ischemic heart disease and Cerebral vascular disease	- high blood pressure	- blood pressure screening - compliance programs
	- high serum cholesteral	- lab testing - diet
	- cigarette smoking	- counselling - education
	- obesity	- weight control - counselling
	- lack of physical activity	- fitness testing - fitness programming - counselling/education
	- stress	- stress reduction - counselling/education
	- family history	- education/screening
	- clinical diabetes	- control of diabetes
Suicide	- stress	- stress reduction education - counselling
	- high alcohol consumption	- alcohol education and control
	- suicide in family/ neighbourhood	- counselling/follow-up
Motor Vehicle Accidents	- high alcohol consumption	- alcohol education and control, law enforcement
	- not wearing seat belts or child restraints	- education, motivation control, law enforcement
	- poor highway design	- advocate changes
	- stress	- stress reduction and counselling
	- speeding	- control, monitoring

Table 6.1 cont'd

Major Disease or Health Problem	Risk Correlate	Area for the Development of Program Options
Venereal disease	- frequent sex with different partners	- promote use of condoms - education - screening/tracking
Dental disease	- non-fluoridated water	- fluoridation system - topical applications
	- poor nutrition	- nutrition education
	- lack of dental health education	- dental health education
Mental health problems	- alcoholism in family	- counselling
	- stress	- stress reduction training
	- social cultural acceptance	- community education
Accidents (fires and drownings)	- lack of education	- education - home assessment
	- lack of use of floatation devices	- water safety instruction
	- poorly constructed homes heating systems and wiring	- education - inspection programs
	- alcohol consumption	- alcohol education and control
Teenage Pregnancies	- lack of knowledge	- family life education
	- spontaneous sexual activity	- counselling/education
	- lack of contraceptive devices	- counselling/education
Respiratory disease	- cigarette smoking	- counselling - education at age 12 years
	- exposure to air borne contaminants	- advocate industrial use of air filtrates
	- nutrition (elderly)	- nutrition education or supplements

Table 6.1 cont'd

Major Disease or Health Problems	Risk Correlates	Areas for the Development of Program Options
Lung Cancer	- cigarette smoking	- history taking - counselling/education beginning at age 12
	- air borne pollutants	- control
Diabetes Mellitus	- genetics	- screening
	- obesity	- weight control - nutritional counselling
	- circulatory dysfunction	- medical screening
Communicable diseases	- presence of infection agents	- immunization
	- nutrition	- nutrition education
Colo-rectal Cancer	- diet (lack of fibre)	- nutritional education - school nutrition programs
Cervical Cancer	- early onset of coitus	- history screening
	- multiple sex partners	- screening
	- veneral disease in which carcinogen transmitted via coitus	
Cirrohosis	- high average levels of alcohol consumption	- control/education
Alcoholism	- high average levels of alcohol consumption drinking to drunkenness	- control/education - counselling
Breast Cancer	- genetic influence	- self screening/induation - medical screening
Prostrate Cancer	- age between 50 - 80	- screening

Source: Adapted from: Hamilton, G. Health Promotion Report. Kenora-Rainy River District Health Council, January, 1981.

Table 6.2

DISTRIBUTION OF POTENTIAL YEARS OF LIFE LOST
BETWEEN AGES 1 AND 70 (PYLL)
BY MAJOR CAUSES, BY SEX, CANADA 1976

CAUSE	PYLL (1-70)				DEATHS (1-70)	
ALL CAUSES	Male	Female	Total	%	Total	%
Ischaemic Heart Disease	156,957.5	36,209.5	193,157.0	15.5	19,138	26.5
Motor Vehicle Accidents	143,251.5	47,893.0	191,144.5	15.4	4,761	6.6
Other Accidents	119,352.5	30,162.5	149,515.0	12.0	4,356	6.0
Suicide	64,253.5	22,844.0	87,097.5	7.0	2,747	3.8
Cancer of Digestive Organs	32,675.0	22,338.5	55,013.5	4.4	5,153	7.1
Cancer of Respiratory Organs	37,519.0	10,955.0	48,474.0	3.9	4,694	6.5
Respiratory Diseases	30,800.5	17,385.5	48,186.0	3.9	3,474	4.8
Cerebrovascular Diseases	22,006.5	19,820.0	41,826.5	3.4	3,705	5.1
Cirrhosis of the Liver	25,112.0	10,659.5	35,771.5	2.9	2,357	3.3
Breast Cancer	170.0	30,240.5	30,410.5	2.5	2,123	2.9
Diseases of Nervous System and Sense Organs	17,170.0	12,789.0	29,959.0	2.4	1,142	1.6
ALL CAUSES	840.760.5	401,505.0	1,242,265.5	100.0	72,329	100.0

Source: Health Field Indicators for Canada and the Provinces, Policy Planning and Information Branch, Health and Welfare Canada, 1979.

Categories included are those groups of causes from the Mortality Classifications which are responsible for more than 2% of PYLL for all causes.

Health Promotion Services in Kent County: A Report of the Kent County District Health Council,

February, 1982.

Figure 6.6 - Program Option Work Sheet

1 MAJOR DISEASE OR HEALTH PROBLEM	2 LEVEL OF IMPORTANCE MORBIDITY RANK ◥ MORTALITY RANK ◣ AND PYLL ⇩							3 ASSOCIATED RISK CORRELATES AND RELATIVE STRENGTHS OF ASSOCIATION H — HIGH M — MEDIUM L — LOW	4 RISK CORRELATES OCCURRING AT THE LOCAL LEVEL H — HIGH M — MEDIUM L — LOW	5 POSSIBLE INTERVENTIONS		6 AVAILABLE PROGRAMS OPTIONS	7 ACCEPTABLE LOCAL PROGRAM OPTIONS	8 PRIORITY FOR PROGRAM OPTIONS
	SEX	0-14	15-44	45-64	65 +	PYLL	OVER-ALL-RANK			PRIMARY	SECONDARY			
	M													
	F													
	M													
	F													
	M													
	F													
	M													
	F													
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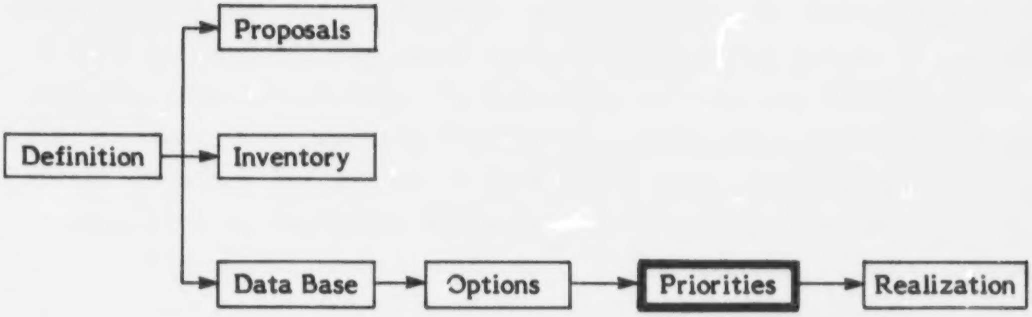
CHAPTER 7 - SETTING PRIORITIES



Introduction

In preceding chapters, three important phases in the development of a health promotion plan have been discussed. Chapter 2 establishes the boundaries of health promotion, both inclusive and exclusive, through the development of a definition. Chapter 5 introduces the second planning phase, the development of a data base from which lists of preventable causes of morbidity and mortality can be identified and organized by factors such as sex and age. Within the data base there is also a provision for generating measures of risk status among members of the local population. Chapter 6 then takes these lists, which in a general sense can be viewed as "those things that should be prevented", and links them to appropriate interventions and programs. From Chapter 6 the planning group should emerge with a broad range of program options, each of which will address a specific risk correlate, and through that correlate, will ultimately address preventable disease, disability, or premature death in the community.

This chapter speaks to the next step in the planning phase: the setting of priorities among the program options which have been identified. It begins with the assumption of scarce financial resources for health programs and services, a consequence of which will be that the communities within a Health Council district will have difficulty pursuing the entire list of program options identified by the health promotion planning committee. Selecting from among the options, then, is a function of setting priorities. By so doing, the available resources can be channeled to the highest priority options where they will have the most beneficial impact.

In setting priorities among program options, there are three fundamental questions which should be considered by planners:

1. Who should be involved in priority setting?

2. By what criteria will priorities be established?

3. By what process can the program options be assessed according to the selected criteria and with involvement from the appropriate groups?

The Task Force has adopted a position with respect to these questions that is similar to the one it took on the selection of a definition for health promotion - the decision should be made by each Health Council according to local perspectives and considerations. Once the answers have been determined, the Council will be able to embark on the task of selecting its priorities, the final function in the development of a health promotion plan.[1]

In preparing for the priority setting exercise, it is important to appreciate that the task is ultimately a balance between the technical and the subjective. There is no doubt that statistics are important tools because they allow for the description and quantification of competing interests. In the end, however, they are tempered by the values and attitudes of the people who are involved in the priority setting process. Thus, priority setting should be a method of reconciling values and judgments of what is important with the available data (Young, et al, 1978).

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[1] It may also be necessary for the Health Council to rank health promotion against a variety of other important health issues that it might wish to support. This more general level of ranking has been requested by the Ministry of Health as a basis for the allocation of provincial funds. In this context, the overall priority for health promotion is likely to be more favourable if it is backed by a purposeful, medium-to-long range plan.

Who Should Be Involved

There are three identifiable groups which are likely candidates for involvement in the priority setting exercise. The first, and most obvious, is the membership of the Health Council committee that is responsible for health promotion. These committees appear to have a varied make-up across Ontario, incorporating health service providers, academics, providers of social and educational services, and members of the general public. All committees are characterized by a membership that is keenly interested in health promotion, but few would claim to be truly representative of the broader community and its perceptions and interests. Nevertheless, the planning group can be considered to be well informed with respect to health promotion theory, relevant local statistics, and the nature and extent of local health promotion services.

The second group which should be considered for inclusion in the priority-setting exercise would be the providers of health services (including both treatment/rehabilitation and health promotion services) in the local planning district. Their primary relationship to the priority setting exercise comes from the likelihood that they will carry much of the responsibility for implementing the final recommendations. It is not the intention of the Task Force to imply that recommendations will be forced onto the service providers, conceivably without their prior knowledge or agreement. Rather, as is presented in Chapter 8, a process of negotiation, evolution, and co-operation is envisioned. Given this process, it remains a logical assumption that much of the evolution and refinement in the delivery of health promotion services is likely to be carried by the existing cadre of service providers.

In this light, it can be argued that service providers will have valid opinions about how health promotion services should evolve. Furthermore, their support will be essential for the successful launching of new or refined services and programs in the realization phase. Accordingly, the Health Council should consider incorporating some form of input from health service providers into the selection of its priorities.

The third group which should be considered for inclusion in the priority setting exercise is the general public. Just as the support of the providers will be necessary for the realization phase of the plan, so will public support be essential to the utilization of these services. Services must be perceived as being both valuable and needed in order to garner community support. In this light, it would be advantageous to introduce an indication of the priorities of the general public into the decision-making process, and to subsequently recommend the development of programs and services for which there is a base of community support.

The Selection of Criteria

The priority-setting process has a number of necessary inputs. As has been previously mentioned, three of these inputs are the data base, the set of program options (sometimes known as the "decision element"), and the groups whose opinions are to be sought. A fourth input is the set of criteria (or "decision criteria") by which the program options will be assessed. It is anticipated that a number of criteria will be used, each of which should have specific relevance to health planning and health promotion. Examples of such criteria might be "proportion of the population affected by the program of service", "per capita cost of the program", or "demonstrated effectiveness of the service or program". (Appendix D contains a number of suggested criteria).

In addition, it is possible that some criteria will be considered to be more important than others. In order to accommodate relative importance a system of weighting can be used to give the more important criteria a greater impact on the outcome.

Another consideration that is related to the selection of criteria is the "format", or the manner in which the scoring for each will be recorded. In its simplest form, the scoring can be a tabulation of "yes" or "no" votes. More complex variations can employ rating scales (score between 1 and 10, for example) or statistical methods of comparing each option against all others and using a formula to translate the results into rankings (this is a method known as "paired comparisons").

The Process for Establishing Priorities

In effect, the process by which priorities will be determined is a set of rules and procedures which are designed to allow decisions to emerge. There are two sets of guidelines that must be selected: the procedural rules (which speak to the form of interaction among the participants), and the computational rules (which enable the group to measure and tabulate the opinions of its members). Both are intended to channel group discussion and inquiry into some form of resolution, while allowing each member an opportunity to be heard and to influence group opinion.

Four techniques by which the planning group can establish its priorities are identified and described in appendix D. They include the Simplex Method, the Nominal Group Planning Method, the Criteria Weighting Method, and the Hanlon Method. While all are considered appropriate techniques, the Task Force would like to highlight a fifth one which was derived from the others by the Niagara District Health Council for use in planning functions (such as the priority setting) in the local context. (Zalot and Lussing, 1983)

The Niagara process employs three steps that can be applied to the ranking of program options:

1. Developing and weighting criteria by which the program options will be judged;

2. Assessing the compliance of each program option against to each criterion and calculating adjusted scores;

3. Reviewing adjusted scores and making refinements to the rankings.

The following discussion examines each step in greater detail and provides illustrated examples.

Step 1 Developing Criteria

Given the task of ranking a number of program options (which may be as few as 25, or as many as 100), it is first necessary to establish the criteria by which they should be judged. The planning group must determine which criteria it considers to be most appropriate and then apply them to each program option. Although, in all probability, a great number of criteria can be envisioned, the list should be pared to a manageable number - certainly no more than 10, and most desirably somewhere between 4 and 8.

Examples of the criteria by which program options can be assessed are as follows:

- the number of people who are affected by the associated disease or disability;

- the extent of damage experienced by each person who suffers from the associated disease or disability;

- the cost of the program per person served;
- the effectiveness of the program;
- the existence of resources to deliver or complement the program;
- the effort or complexity which must be employed in order for the program to achieve its objectives.

The Simplex Method, which is described in Appendix D, provides useful parameters to consider in the development of criteria.

Once the list of criteria has been developed, it may become apparent to the planning group that some are more important than others, and deserve to have more influence in the setting of priorities. Should this be the perception, then it will be necessary to stratify or develop weightings for each criterion. This can be achieved by using a 5 point scale by which each committee member scores each criterion according to perceived importance. Figure 7.1 illustrates how such a scale might appear.

Figure 7.1
Weighting Scale for Criteria

	Minimal Importance	Some Importance	Important	Great Importance	Critical Importance
Criterion 1	1	2	3	4	5
Criterion 2	1	2	3	4	5
Criterion 3	1	2	3	4	5

Scores for each criterion are then averaged across all responses to yield its weighted value. This is accomplished by totalling all of the scores for each criterion and dividing by the number of scorers. Once the averages have been determined, the group should review the results to see if any weighting departs significantly from the members' intuitive judgments. Anomolies which are identified can be discussed by the group and reconciled by making adjustments, if deemed appropriate.

Step 2 Assessing Program Compliance

With the set of weighted criteria established, the planning group must next assess each program option against each criterion in order to determine its "program weight". The first task in achieving this end is to develop a scale by which the compliance of each program option can be judged against each criterion. Figure 7.2 illustrates how this can be done, using two hypothetical program options as examples.

Figure 7.2
Program Compliance Scale

Program Options and Criteria		Extent of Compliance			
	None	A little	Some	A lot	Complete
1. Smoking Cessation - Teens	1	2	3	4	5
criterion 1	1	2	3	4	5
criterion 2	1	2	3	4	5
criterion 8	1	2	3	4	5
2. Infant Car Seats					
criterion 1	1	2	3	4	5
criterion 2	1	2	3	4	5
criterion 8	1	2	3	4	5

In the illustration, each committee member would rate a smoking cessation program aimed at teens against each criterion that was developed (in this case 8). Then, the cumulative scores for each criterion would be calculated and divided by the number of scorers in order to determine the average score. In this exercise it is assumed that each committee member will be familiar with all program options, and that a considerable amount of discussion and debate will have already occurred. The scoring becomes a method of resolving the issue once all members have had a chance to voice their opinions and examine those of their colleagues.

Some Health Councils will prefer to have the group choose each program weight on a consensus or democratic basis following the completion of the discussion phase. It is sometimes argued that this method is superior to the individual scoring and averaging method because group members are more likely to feel a sense of "ownership" in the decision, and will be more strongly committed to it (Hall, 1971).

Whichever method is selected, the outcome will be an overall compliance score for each program option as judged against each criterion. This score is called the "program weight" and would be recorded in the manner illustrated by Figure 7.3.

Figure 7.3
Recording Program Weights

Program Options and Criteria	Program Weight
1. Smoking Cessation	[1]
criterion 1	3.6
criterion 2	2.0
↓	
criterion 8	4.2
2. Infant Car Seats	[2]
criterion 1	3.0
criterion 2	1.0
↓	
criterion 8	5.0

[1] These scores are illustrative of those which would be produced by the individual scoring and averaging method.

[2] These scores are illustrative of those which would be produced by the consensus or democratic scoring method.

Once the program weights have been determined, they must still be adjusted by the different values which were assigned to each criterion, should the committee have decided that some were more important than others. This involves a simple mathematical exercise in which the program weight for each criterion is multiplied by its criterion weight in order to yield an adjusted value. The adjusted values for each criterion are then added together to produce a "program score" that is assigned to each program option. Figure 7.4 extends the working example to illustrate this exercise.

Figure 7.4

Calculating Program Scores

Program Option/ Criteria	Criterion Weight		Program Weight		Adjusted Weight		Program Score
1. Smoking Cessation - Teens							
Criterion 1	2.4	x	3.6	=	8.6		
Criterion 2	4.6	x	2.0	=	9.2		
↓							
Criterion 8	1.2	x	4.2	=	5.0		
					22.8	=	22.8
2. Infant Car Seats							
Criterion 1	2.4	x	3.0	=	7.2		
Criterion 2	4.6	x	1.0	=	4.6		
↓							
Criterion 8	1.2	x	5.0	=	6.0		
					17.8	=	17.8

In Figure 7.4 it can be seen that the weightings which are applied to the criteria and the program compliance scores work together to give a sense of perspective or balance to the final program score. With these adjustments, program options which score very highly on less significant criteria will not be given a high overall program score. This reduces the chance that they might be given a higher priority than they are due.

Once the program scores have been calculated for each program option, they can be ordered in descending value to produce the priority listing. In other words, the program option that achieved the highest score would be ranked first and the one with the lowest score would be ranked last.

Step 4 Review and Refinement of Program Scores

The final step in the priority-setting exercise involves a review of the rank-ordered program options with the goal of identifying perceived anomalies and making refinements to accommodate them. This process involves group discussion and decisions made either by consensus or democratic methods. It is intended to ensure that the collective expertise and experience of the group is employed and that critical considerations are not inadvertently ignored.

Within the process of review and refinement, the planning committee might wish to consider the level of support and demand that the general public and the providers of health care services have expressed for each program option. Adjustments can be made to accommodate strong expressions of support or disaffection which have not been reflected in the overall priority rankings. The means by which the priorities of service providers and the general public can be polled are discussed in the following section.

Once the review and refinement process has been completed the Health Council will have determined its priorities among the program options which, in turn, were identified as being relevant to the local district.

Polling the Community and Service Providers

As mentioned earlier, there are advantages to polling both the community-at-large and the providers of health services in order to determine which program options they support. By so doing, it is conceivable that the Health Council will find itself with three ranked priority lists - one from its own planning committee, one from the general public, and one from service providers. Ideally, the program options which are ultimately afforded the highest priority would be those with high measures of support from all three constituencies. As a consequence, it is likely that they could be implemented with a minimal number of impediments or barriers.

It is also possible, however, that the Health Council planning group might place high priority on a specific program option while the general public or the health care providers indicate a strong disaffection for it. In such a case, the Health Council might consider adopting an alternate strategy to merely pushing ahead. It might, for example, wish to launch an educational program in order to raise the level of awareness in the dissenting group and, perhaps, to foster more favourable attitudes towards the program. Another response might be to lower the priority rating for the program option and replace it with one for which there is a broader base of support. Under most circumstances, it would seem that the least favourable option would be to retain the high priority level and to promote the introduction of a program for which there is strong opposition.

Polling the general public and service providers are qualitatively different tasks from that of determining priorities within the planning group. The constitutences are much larger, less accessible, and less likely to be informed about health promotion than are the members of the planning committee. In order to accommodate these constraints, the Task Force suggests that a questionnaire format be employed to measure priorities. In addition, it is probable that a sample from each group will have to be drawn rather than attempting to poll every member.

The questionnaire will have to make known to the respondents the range of program options which were derived from the data base and subsequent literature searches. The number of program options will vary from one jurisdiction to another, probably from a low of about 25 to a maximum of about 100. In the ideal, the questionnaire should rank the options from the highest to the lowest priority for each respondent and then aggregate these rankings for the entire sample.

There are several tested techniques which have been developed both for the selection of representative samples and for the measuring of priorities among respondents. In many cases, the expertise for addressing each of these functions within the staff complement of the Health Council. When further assistance is required, the local municipal or regional planning department, community college, or university are among the best resources.

The design options for this type of questionnaire are fairly well established. One technique known as "paired comparisons", asks the respondent to choose between each program option and each of the remaining ones in a series of forced-choice pairings (Moroney, 1971). This technique makes the ranking task easier because the respondent has only to make one choice at a time rather than simultaneously considering all items in relation to all others. It has limitations on the number of items which can be ranked, however, and can only be applied to lists of up to 50 program options. Beyond this number, similar options would have to be collapsed into larger categories in order to reduce the overall number of choices. If this is not acceptable, an alternate technique can be selected.

A second way of organizing a questionnaire is to list all program options in random order, and to place a five-point scale beside each, where a score of 1 would indicate the lowest priority and 5 would indicate the highest priority (Satcher, 1977). Respondents would be asked to ensure that they assign at least two program options to each score in order to counteract the tendency to rate all options either very high or very low. The scores for each program option are then totalled across all respondents and then ranked according to their cumulative scores.

As mentioned earlier the results of these surveys should be incorporated into the final selection of priorities, but should not be dominant influences. Instead, they might best be treated as indicators of areas for potential controversy and thereby allow for avoidance measures to be taken.

REFERENCES

1. Hall, J., Decisions, Decisions, Decisions, Psychology Today, 1971, November, 51-54, 86-88.

2. Moroney, M. J., Facts From Figures, Middlesex, England: Penguin, 1971.

3. Satcher, D., A Needs Assessment Study for Family Practice in an Inner City Community. UCLS School of Medicine, Robert Wood Johnson Foundation, 1977.

4. Young, A., et al, Methods for Setting Priorities in Areawide Health Care Planning. Washington, D.C.: U.S. Department of Health, Education and Welfare, 1978.

5. Zalot, G., and Lussing, F. A. Process for Establishing Health Care Priorities, Health Management Forum (in press, Autumn 1983 issue).

Additional Readings

1. Blum, H. L., Planning for Health: Development and Application of Social Change Theory. New York: Human Sciences Press, 1974.

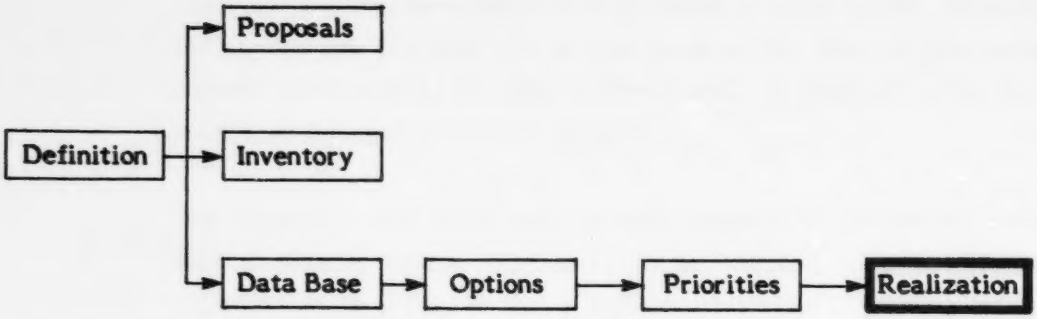
2. Delbecq, A. L., and Van de Ven, A. H., The Nominal Group as a Research Instrument for Exploratory Health Studies, American Journal of Public Health, 1972, 62, 337-342.

3. Hanlon, H. U., Administration of Public Health, St. Louis: C. V. Mosby Co., 1974.

4. Shalinsky, W. Small Groups in the Planning and Policy Fields. Contact, 1977, 9, (3), 156-183.

5. Spiegel, A. D., and Hyman, H. H. Basic Health Planning Methods. Germantown, Maryland: Aspen, 1978, pp. 193-201 (Nominal Group Technique) and pp. 49-51 (delphi forecasting).

CHAPTER 8 - REALIZATION OF THE PLAN



Introduction

The previous chapters of this Guide have dealt with the various steps involved in the process of developing a health promotion plan. Ideally, they will have resulted in a plan that features a series of ranked health promotion options which have, in turn, been identified as responses to the major preventable health problems and opportunities for health enhancement in the local district. The development of these ranked options will be based on empirical data and literature search, and will have the support of the general public and the network of health service providers.

It is essential, however, that the planning process not stop with the production of a plan. The planning process is not complete and, in fact, may represent wasted effort on the part of all concerned if careful attention is not paid to its realization.

Realization refers to the process of translating the plan into action. It encompasses the crucial stage of development between the completion of a "plan on paper" and the actual implementation of programs. As such, realization involves a considerable amount of discussion and negotiation with local providers and potential providers of health promotion services, whether they be individuals, agencies, organizations, or institutions. This chapter focuses on developing the role for these local participants with respect to the health promotion priorities which have been identified in the plan.

Tasks Involved

There are three major tasks involved in the process of realization:

- (i) the identification of the current involvements of local participants in health promotion;
- (ii) the discussion of health promotion options with these local participants;
- (iii) the provision of support to local participants in the preparation of proposals and the development of programs or services.

(i) The first task involved in the realization of the plan is to identify who the local providers of health promotion services are. It is likely that much of this task will have already been done through the completion of an inventory. Moreover, in many instances, some of the participants will have had some involvement in earlier parts of the planning process. Additional information may be required, however, to ascertain the current role and level of involvement of each, and to determine the potential and the extent of desire for new or expanded involvement.

(ii) Once the local service providers have been identified and their role with respect to health promotion clarified, the processes of discussion and negotiation must begin. This process can be summarized in the following general steps:

- a) While the realization of the plan requires the identification of the current involvements of local service providers, the reverse is also true. That is, the local service community must be made aware of the health promotion plan and must understand its recommendations. This may be accomplished through a number of recognized techniques, such as wide distribution of copies of the plan for comments; public meetings and presentations; consultations with individual or groups of participants, and so on.

- b) It may be possible to identify one or more priority options which certain local health service providers are immediately interested in pursuing. In this case, they should be encouraged to develop a proposal to implement the intervention. Support in this process may be required, as discussed below in section (iii).

c) Where local service providers are not immediately interested in pursuing priority options, the process of realization will involve holding discussions which are aimed at convincing an appropriate agency or resource to undertake the implementation of a preferred program option. In most cases, the appropriate provider will be identified on the basis of past experience, current involvement, or other criteria such as program stability, public profile, or linkages with other agencies.

This process of discussion must be approached with flexibility, recognizing that a priority option may have to be tailored to a specific agency, organization, or group, or that a collaborative effort involving two or more providers might be the best course to follow.Through this process, these discussions are likely to evolve into a negotiation process.

(d) Having gone through the above steps, it remains possible that one or more of the priority options set by the health promotion plan will be left without a sponsor. In this case, community development or activation strategies may be employed to mobilize community interest and activity around a specific issue. This may involve identifying groups and organizations which are not normally associated with the health promotion network, but which have some identified capabilities in the field. For example, if a priority is to reduce the injuries to children in automobile accidents, local restaurants might help. For example, McDonald's Restaurants have developed a "Make it Click" campaign to encourage seat-belt use. Elsewhere, Chinese food restaurants have distributed fortune cookies with the message "Confucius say: Buckle up! Seat-belts save face". Here, the key is to be innovative and to look beyond the boundaries of the traditional health care services.

(iii) Having actively sought the involvement of the local health promotion network in the implementation of the plan, the Health Council may be requested to provide services towards the preparation of a proposal. Assistance may be required in clarifying the nature of the problem and the proposed intervention; in reviewing relevant literature; or in actually writing the proposal (see chapter 4 for some considerations). This assistance may be provided directly by the Health Council planning group, by Health Council staff, or by another designated agency or organization (such as The Public Health Unit, or a local university).

Responsibility For Realization

The process of realization of the health promotion plan is essential, as it can mean the difference between a plan sitting on the shelf or having some impact in the community. As a consequence, it is important that the responsibility for undertaking these tasks involved be assigned to a capable community resource. Three options for the location of this responsibility are presented here, although others may be considered more appropriate, depending on local circumstances.

(i) The District Health Council
This guide has been written primarily for the Health Promotion Committee of local District Health Councils. Having initiated the planning process and overseen the development of the plan, the Health Council may want to continue its involvement through the realization phase. As discussed above, the realization phase does not involve the implementation of programs, only the mobilization and co-ordination of existing community resources. The Health Council, because of its role in the community, may be in an ideal position to do this. In some cases, the availability of staff and volunteer resources may limit the extent to which this process can be fully completed, and may necessitate the examination of other alternatives.

(ii) The Local Public Health Unit
It is likely that the local Health Unit will have been involved in the planning process. This involvement, in conjunction with the public health mandate, may place it in an excellent position to co-ordinate the realization phase of the plan. In addition, the new legislation governing Health Units gives them a clear role in the implementation of health promotion programs. In all likelihood, then, there will be a strong interest in the realization phase on the part of the local Health Unit.

It is interesting to note that a recent precedent has been set in which the local Health Unit adopted a realization-type role. In Thunder Bay, the Health Council conducted a feasibility study for the establishment of a Health Promotion Foundation to initiate, co-ordinate, and implement programs. The study concluded that a new organization was not needed because its identified functions could appropriately be assumed by the local Health Unit. (Thunder Bay District Health Council, 1982).

(iii) The third alternative involves some form of collaborative effort by local health service providers in the realization of the health promotion plan. This collaboration may include the District Health Council and the Public Health Unit, in addition to a number of other agencies and organizations which have a commitment to the evolution of health promotion services. In effect, the group would act as a sort of steering committee that would undertake the discussions and negotiations necessary for the development and expansion of services and programs.

It is important to appreciate that the processes of planning and realization are continuing functions. As one plan is completed, and the realization phase is undertaken, it will then become necessary to begin work on a second plan. In this way, changes in the health status of the population can be monitored, and new priorities defined to meet the changing requirements of the community. It is with this idea in mind that the network of health promotion services will move towards becoming a responsive and evolving force in the interests of community health.

REFERENCES

1. Anonymous. McDonald's Helps Make It Click, Family Safety, 41 (3): Fall, 1982.

2. Picherack, F. Report of the Health Promotion Foundation Committee to the Thunder Bay District Health Council. Thunder Bay District Health Council: 1982.

APPENDIX A

EXAMPLES OF HEALTH PROMOTION INVENTORY QUESTIONNAIRES

Source: Kent County District Health Council. Health Promotion Services in Kent County February, 1982

HEALTH PROMOTION QUESTIONNAIRE

"Health Promotion" - Definition

For the purposes of this questionnaire, our Health Promotion Committee has defined health promotion programs as those which

> "INCREASE BEHAVIOUR THAT CONTRIBUTES TO PERSONAL HEATH AND WELL-BEING AND REDUCE BEHAVIOUR THAT EXPOSES INDIVIDUALS TO HEALTH RISK"

It is not intended that this survey include services involving direct treatment of illness or accident prevention. The project will, however, encompass such areas as:

Fitness Promotion
Promotion of Good Nutrition
Smoking Cessation & Prevention
Prevention of Alcohol & Other Drug Abuse
Maternal & Child Well-Being
Genetic Counselling
Contraception Education & Promotion
Prevention of Sexually Transmitted Diseases
Promotion of Dental Hygiene
Mental Health Promotion & Stress Reduction
etc. (Please do not consider this list to be all inclusive).

Our interests and the following questions are not limited to those organizations providing formal or sophisticated health promotion programs. A simple poster display, "cheque stuffer", or any attempt at conveying an appropriate message may well be considered as a "program" of sorts. Please do not hesitate to describe any effort that might involve the promotion of good health.

QUESTIONNAIRE

1. Do You Offer Health Promotion Programs?

According to the parameters provided in the introduction, do you feel that your organization has been involved in the presentation of any health promotional activities or programs within the past two years?

2. Description of Programs

Describe the health promotional program(s) you conduct(ed) with emphasis on the following categories of information. (A "Program" normally includes an educational component or some form of informational dissemination, as opposed to the mere existence of a facility).

Extra space has been provided at the end of this questionnaire for organizations offering a number of programs. Feel free to add more pages if necessary. Record information about these additional programs using the format followed in this question.

(a) Name of Program

(b) Program Aims and Objectives
Is the program aimed at increasing knowledge/awareness or immediate health-related behaviour change? What health benefits might be derived from the program?

(c) Program Activities
Describe the program activities - what format and methods were applied? What is the time frame? Is the program ongoing, periodic, or a once-only effort?

(d) Target Population
Is the program offered to the general public or restricted to members of your agency/school/industry? Is the program directed at laymen, health service providers, groups "at risk", etc.?

(e) Funding Arrangements

Is the program funded by federal, provincial or municipal grants; private sources; United Way; charitable funds; fee for service; etc.?

(f) Qualifications of Program Leaders/Deliverers

Are the program leaders staff members or volunteers? What special skills, experience, degrees or certificates do they hold?

3. Available Facilities

(a) Identify the facilities you have that might be utilized within the context of health promotional programs. (Gym, swimming pool, weight/exercise room, baseball diamond, ice rink, track or jogging path, bicycle path, football or soccer field, tennis courts, squash handball or racquetball courts, or other). Please specify.

(b) Are any of your facilities accessible to individuals or groups outside your organization? If so, which ones?

4. Available Resources - Aids

(a) Identify those resources or aids you have that might be used in pursuing a health promotion program. (Films, books, periodicals, pamphlets, visual aids, lecture room/hall, or other). Please specify.

(b) Are any of these resources available to individual and groups outside your organization? If so, which ones?

5. Your Comments

(a) What additional facilities or resources would be useful to you in the operation of health promotional programs by your organization?

(b) What gaps do you perceive in health promotion activities in Kent County?

(c) Please add any information, comments or suggestions that might be helpful in identifying available health promotion activities in Kent County and planning for future development in this field.

Source: Niagara District Health Council. Health Promotion and Disease Prevention in Niagara Today, Health Needs Task Force Report #2, February 17, 1982.

SCHOOL BOARD QUESTIONNAIRE

Demographic Data

1. Name of School Board.
2. City or Town of Location.
3. What are your boundaries?
4. Telephone Number.
5. Position of Person being Interviewed.

Resources

6. Does this board have an official policy statement on health promotion? Please specify.
7. Does this board have an official policy statement on disease prevention? Please specify.
8. Which of the following services does this board make available to the schools?

Services	K-6	7-8	9-13
A health education consultant			
Workshops on health education			
Professional development conferences on health			
Special research projects			
Program guidelines. Please specify			
Audiovisual aids			
Other. Please specify			

9. In addition to health personnel made available by the public health unit, what other health personnel are provided for the public schools? (For Health Promotion, For Disease Prevention).
10. In addition to health personnel made available by the public health unit, what other health personnel are provided for the high schools? (For Health Promotion, For Disease Prevention).
11. Are any of the following required to be incorporated in the schools by virtue of board policy?

Service	K	1	2	3	4	5	6	7	8	9	10	11	12	13
Screening Dental check-up														
Eye Test														
Hearing Test														
Tuberculosis Test														
Scoliosis														
Communicable disease (i.e. lice, scabies)														
Other (please specify														
Immunization														
Other (please specify)														

Concluding Questions

12. Do you feel there are any areas in the field of health promotion which may be improved in the school system? Please specify.
13. Do you feel there are any areas in the field of disease prevention which may be improved in the school system? Please specify.

APPENDIX B

SOURCES FOR MORTALITY AND MORBIDITY STATISTICS

SOURCES FOR MORTALITY STATISTICS

A. Federal Government

Statistics Canada produces the following publications:

- 84-206 Vital Statistics Vo. III Deaths
- 84-203 Causes of Death, Provinces by Sex and Canada by Sex and Age

Also

- CANISM - Canadian Socioeconomic Information System represents a cross-classified data base and permits the user to define his/her tabulations according to his/her specifications.

Other unpublished data generated at the time of publication are available on aspects of mortality - residence, cause of death, cause of stillborn, etc. Some 27 tables are available. Statistics Canada can respond to individual specifications but a considerable period of time is required for the delivery of this information.

B. Provincial Government

- 2-101 Vital Statistics - Registrar's Office, Statistical Inquiry
- 2-102 Some Vital Statistics for Certain Health Units and Territorial Districts, Ontario - Ministry of Health, Data Development and Evaluation Branch
- 2-103 Mortality from Suicide - Ministry of Health, Data Development and Evaluation Branch
- 2-104 Vital Statistics, Computer Tapes, Ministry of Health, Data Development and Evaluation Branch

In addition to those statistics which are provided by the Ministry of Health, a District Health Council may want to review statistics collected by various community agencies. For example, many Health Units collect mortality and natality data. The local policing and/or the OPP detachments make detailed reports of motor vehicle accidents and violent deaths (e.g. manslaughter). These sources may provide a district specific picture as well as information on related factors. This information about mortality, as well as risk behavior and environment, may only be retrieved at the local detachment with great difficulty, if such a record source has to be done manually. However, since these reports are sent to a central collection point, e.g. Ministry of Transportation and Communications in Downsview, Ontario, for fatal motor accidents, then these central collection points may provide data retrieval. These central sources have the added advantage of a provincial comparison.

C. Private/Interest Groups

Alternate sources of publications on mortality are available, e.g. Accident Fatalities, which is published annually by the Canadian Safety Council (1765 St. Laurent Blvd., Ottawa, K1G 3V4). This publication provides a more detailed discussion of these data than is provided by the usual government agencies. The data which are used to publish this report are supplied by Statistics Canada.

SOURCES FOR MORBIDITY STATISTICS

A. Federal Government

- 82-206 Hospital Morbidity
- 82-208 Surgical Procedures and Treatments
- 82-209 Hospital Morbidity - Canadian Diagnostic List
- 82-211 Therapeutic Abortions
- 82-201 Notifiable Diseases (Detailed annual data available from 1978 to present)
- 82-207 New Primary Sites of Malignant Neoplasms + Supplement New Primary Sites of Malignant Neoplasms in Canada by Census District
- 82-212 Tuberculosis Statistics, Mortality and Morbidity

B. Provincial Government

- 2-201 Primary Diagnosis of Adults and Children, Separated from Active, General Rehabilitation and Special Rehabilitation Hospitals
- 2-202 10 Leading Diagnoses: County
- 2-203 Separations from Hospitals by County of Residence by Diagnostic Chapter Headings
- 2-204 Separations from Hospitals by County of Residence by Ontario Broad Code Diagnostic Categories (S35)
- 2-205 Separations and Days by County of Residence by Surgical Code by Age Group (S56)

- 2-206 Separations and Days by County of Residence by Hospital Code by Surgical Code (R4)
- 2-207 Separations and Days by County of Residence by Hospital Code by Ontario Broad Code (R5)
- 2-208 Separations from Active Treatment Hospitals - Computer Tapes
- 2-209 Separations from Psychiatric Hospitals - Computer Tapes
- 2-210 Admissions to Psychiatric Hospitals - Computer Tapes

As indicated with mortality data, alternate provincial sources of information could include the province's various policing agencies. These sources can provide local description of injuries associated with motor vehicle accidents, as well as relevant lifestyle (alcohol consumption, drug ingestion, excessive speed, seatbelt use) and environmental factors. The Fire Marshall's Office will be able to provide additional detail of injury associated with fire.

APPENDIX C

EXAMPLES OF QUESTIONNAIRES FOR MEASURING HEALTH STATUS

Source: Chambers, L. The McMaster Health Index Questionnaire. Department of Clinical Epidemiology and Biostatistics, McMaster University, July 1982.

Section A

The questions in the first section ask about your health and whether you are able to do certain things.

1. Today, are you physically able to run a short distance, say 300 feet, if you are in a hurry? (This is about the length of a football field or soccer pitch.)
2. Today, do you (or would you) have any physical difficulty at all with:
   - (a) Walking, as far as a mile?
   - (b) Climbing up 2 flights of stairs?
   - (c) Standing up from, and/or sitting down in a chair?
   - (d) Feeding yourself?
   - (e) Undressing?
   - (f) Washing (face and hands), shaving (men) and/or combing hair?
   - (g) Shopping?
   - (h) Cooking?
   - (i) Dusting and/or light housework?
   - (j) Cleaning floors?
3. Today, are you physically able to take part in any sports (hockey, swimming, bowling, golf, and so forth) or exercise regularly?
4. At present, are you physically able to walk out-of-door by yourself when the weather is good?
   - (a) What is the farthest you can walk by yourself? (one mile or more, less than one mile but more than 30 feet (about the side of a house), less than 30 feet).
   - (b) Are you able to walk by yourself? (Between rooms, only within a room, can't walk at all).
5. Today, do you (or would you) have any physical difficulty at all travelling by bus whenever necessary?
6. Today, do you have any physical difficulty at all travelling by car whenever necessary?
7. Do you have any physical difficulty at all driving a car by yourself? (Is this because of a physical disability?)

8. Do you wear glasses?
   - (a) Do you have any trouble seeing ordinary newsprint when you wear your glasses?
   - (b) Do you have a headache after watching television or reading when you wear your glasses?
   - (c) Do you have any trouble seeing ordinary newsprint?
   - (d) Do you have a headache after watching television or reading?
9. Do you wear a hearing aid?
   - (a) Do you have trouble hearing in a normal conversation with several other persons when you wear your hearing aid?
   - (b) Do you have trouble hearing the radio or television when you wear your hearing aid?
   - (c) Do you have trouble hearing in a normal conversation with several other persons?
   - (d) Do you have trouble hearing the radio or television?

Section B

Often peoples' health affects the way they feel about life. For these next questions, please make the choice that you feel is closest to the way you feel about each statement. (Strongly agree; agree; neutral; disagree; strongly disagree).

10. I sometimes feel that my life is not very useful.
11. Everyone should have someone in his life whose happiness means as much to him as his own.
12. I am a useful person to have around.
13. I am inclined to feel that I'm a failure.
14. Many people are unhappy because they do not know what they want out of life.
15. In a society where almost everyone is out for himself, people soon come to distrust each other.
16. I am a quick thinker.
17. Some people feel that they run their lives pretty much the way they want to and this is the case with me.
18. There are many people who don't know what to do with their lives.
19. Most people don't realize how much their lives are controlled by plots hatched in secret by others.

20. People feel affectionate towards me.
21. I would say I nearly always finish things once I start them.
22. When I make plans ahead, I usually get to carry out things the way I expected.
23. I think most married people lead trapped (frustrated or miserable) lives.
24. It's hardly fair to bring children into the world the way things look for the future.
25. Some people feel as if other people push them around a good bit and I feel this way too.
26. I am usually alert.
27. Nowadays a person has to live pretty much for today and let tomorrow take care of itself.

Section C

This section contains some questions on general health and your social activities.

28. How would you say your health is today? Would you say your health is very good, pretty good, not too good?
29. Taking all things together, how would you say things are today. Would you say you are very happy, pretty happy, not too happy?
30. In general, how satisfying do you find the way you're spending your life today? Would you call it completely satisfying, pretty satisfying, not very satisfying?
31. How would you say your physical functioning is today? (By this we mean the ability to move around, see, hear and talk). Good, good to fair, fair, fair to poor, poor?
32. How would you say your social functioning is today? (By this we mean your ability to work, to have friends, and to get along with your family). Good, good to fair, fair, fair to poor, poor?
33. How would you say your emotional functioning is today? (By this we mean your ability to remain in good spirits most of the time, and to be usually happy and satisfied with your life). Good, good to fair, fair, fair to poor, poor?
34. Are you presently working on a job for wages either full- or part-time?
    (a) Are you presently on vaction; on sick leave; retired, a student; a housewife; other. (please specify).
35. How much time, in a one week period, do you usually spend watching television? None, less than three hours a week, less than one hour a day, more than two hours a day?

36. Which of the following describe your usual social and recreational activities?
    - (a) Going to church?
    - (b) Going to a relatives's home?
    - (c) Any other activities? (please specify)
37. Has anyone visited you in the last week?
    - (a) A relative?
    - (b) A friend?
    - (c) A religious group member?
    - (d) A social agency representative?
38. Do you have a telephone?
39. Have you used your telephone in the last week to call:
    - (a) A friend?
    - (b) A religious group member?
    - (c) A social agency representative?
40. Have you been called in the last week by a social agency representative?
41. How long has it been since you last had a holiday? (Months or years)
42. During the last year, have any of the following things happened to you:
    - (a) Separation from your spouse?
    - (b) Divorce?
    - (c) Gone on welfare the last year?
    - (d) Trouble getting along with friends/relatives during the last year?
    - (e) Retired from work during the last year?
    - (f) Some other problem or change in your life? (please specify)
43. As part of this research project, we would like to contact one person who is close to you and would be familiar with your everyday health (such as a relative or close friend).

    May we have your permission to hold a short telephone interview with the person you select, to ask about his/her impression of your health?

Thank you very much for your help in this study.

Source: Chang, R. S. ed. (1981) Preventive Health Care, Boston: G. K. Hall Medical Publishers P24 - 9.

PREVENTIVE MEDICINE QUESTIONNAIRE*

Demographics

Name: ____

Address: ____

Phone Number: Daytime ______________ Evening ________________

Social Security No. ______________ In emergency contact: ____________

______________ at (Phone no.) ______________________

Risk Variables

Race: ________ Black _____ White _____ Am. Indian _____ Hispanic ______

Other ____

Religion: ________________ Do you attend services regularly? __________

Family income: _______ Below Middle ____ Middle _____ Above Middle

Education: Highest level attained? ______________________

Highest level spouse attained? ____________________

Highest level of children? ______________________

____

Age: ____

Marital Status: ______ Married ___ Single ___ Divorced (how long ago? ___)

______ Separated (how long ago ____) ______ Widowed how long ago? ___)

Physician's Comments: ______________________________

____

____

____

---

*To be used in addition to the traditional medical history. Omitted are the family history, past medical history, hospitalization, immunization, allergies, and review of systems, all of which can be supplied by the traditional medical history.

Habits

Smoking: Do you smoke? ______ Yes ______ No If yes,

Number of cigarettes per day ______________________

Number of pipes per day ______________________

Number of cigars per day ______________________

Did you previously smoke, but quit? ______ Yes ______ No
If yes,

How many packs did you smoke per day? ______________

How many cigars did you smoke per day? ______________

How long has it been since you smoked? ______________

Exercise: (both at home and at work)

______ sitting most of the day with little exercise

______ about the equivalent of 1 mile of walking a day (e.g., 10 flights of stairs)

______ about the equivalent of 2 miles of walking a day

______ more than the equivalent of 2 miles a day

Alcohol: Do you now drink any alcoholic beverage (wine, beer, hard liquor)

______ Yes ______ No If yes,

In an average month ______ 8 or less drinks (2/week)

In an average month ______ 12-24 drinks (3-6 drinks/week)

In an average month ______ more than 24 drinks (7 or more drinks/week)

Do you ever have a drinking problem? ______ Yes ______ No

Nutrition: Do you feel that your diet could be improved?

______ Yes ______ No

If yes, do you feel you have any of the following problems in your diet?

______ too many calories

______ too much sugar

______ too much meat

______ not enough fruit

______ not enough vegetables

______ too much to eat

______ too much coffee or tea

______ skip meals

______ not enough vitamins

______ too much "fast food"

______ other: ____

____

____

Safety and Hazards

	Yes	No	Other
Do you use or carry a weapon?	____	____	____
Have you ever been arrested?	____	____	____
Drive after drinking or taking drugs?	____	____	____
Drive a dune buggy or snowmobile?	____	____	____
Drive a motorcycle?	____	____	____
Do you use a safety helmet?	____	____	____
Fly a plane?	____	____	____
Engage in sports?	____	____	____
What types?	____	____	____

____

Use a seat belt while driving? ____ ____

Type of car ____________ Last time had a car safety check ______________

Amount of mileage driven per year ______________________________________

Other records? ____

Moods and Emotions

	Rarely	Good part of time	Most of the time
Feel depressed, sad, or blue	____	____	____
Crying or angry	____	____	____
Restless or anxious	____	____	____
Feel that others would be better off if I were dead	____	____	____
Thinking about suicide	____	____	____
People at work or home make me tense	____	____	____
Have pain or illness made worse by stress	____	____	____
Take medication for nerves	____	____	____
Have difficulty sleeping	____	____	____
Have loss of appetite or overeat because of nerves	____	____	____
Worry	____	____	____

Other: ____

____

Other comments: ____

____

Family and Other Support

	Rarely	Some of the time	Often
I can count on my family helping if I have a problem	____	____	____
My family assists me if I want to make major personal changes	____	____	____
Time to spend with my family is satisfying	____	____	____
I can talk to a good friend if I have a problem	____	____	____
I can talk to my religious counselor if I have a problem	____	____	____
I can find someone to talk with if I need to	____	____	____

Occupational History

Please describe your job; include any health risks such as chemicals, noise, stress.

Job title: ____

Description of duties: ______________________________________

____

	Yes	No
Do you have significant responsibility and/or leadership at work	____	____
Chemicals	____	____
Dust/fumes	____	____
Noise	____	____
Machinery	____	____
Many deadlines	____	____
Shift work	____	____
Stress	____	____
Recent promotion	____	____

Life Changes (recent changes in your life can have a major impact on health)

Loss of spouse	____	____
Change in residence	____	____
Change in marital status	____	____
Death of member of family	____	____
Personal illness or injury	____	____
Fired or retired	____	____
Work/business or financial change	____	____
Family member leaving home	____	____
Trouble or illness at home or work	____	____
New member of family	____	____
Other important event	____	____

Explain: ____

____

____

Self-care

(Women) Do you have regular Pap and breast exams? _____ _____

(Women) Do you regularly examine your own breasts? _____ _____

(Men) Do you know how to examine your own genitals? _____ _____

Do you know how to measure your blood pressure? _____ _____

Do you know your immunization needs? _____ _____

Have you ever had a positive tuberculosis test? _____ _____

Do you have regular checkups? _____ _____

What was your last blood pressure? _____

Health Planning

Do you want specific information on any particular medical topic? _____ _____

What topic? ____

Are you concerned that you may be ill? _____ _____

Source: Chang, R. S. ed. (1981) Preventive Health Care, Boston: G. H. Hall Medical Publishers p50.

Dietary History Form

Name ______________________________ Sex __________________

Age __________________

Weight ________ Height ________ Ideal Weight ________

Number of meals eaten per day _____

Breakfast: Yes ____ No ____

Lunch: Yes ____ No ____

Dinner: Yes ____ No ____

Snacks: Yes ____ No ____ Number/day ____

How many meals do you eat away from home in one week? ____

How many of these meals are at:

Coffee shops ____

Restaurants ____

Fast food stands _____________________________________

Do you ever use convenience foods, such as frozen dinners, cake mixes, pancake and muffin mixes, skillet casserole mixes, etc.? Yes ____ No ____

If yes, how many times per week do you use these foods? _____

How many servings of fruit do you have in one day? _____

Do you include an orange, grapefruit, melon, tomato, orange juice or grapefruit juice? Yes ____ No ____

How many servings of vegetables do you have in one day? ____

Do you include a dark green leafy or dark orange vegetable? Yes ____ No ____

How many glasses of milk do you drink each day? ____

Is it whole, skim, lowfat, chocolate, buttermilk? __________________

How many eggs do you eat per week? ____

How often do you have desserts? Daily _____ Weekly _____ Occasionally _____

How many grain products do you have per day (cereal, bread, rice, noodles, tortillas, etc.)? _____

Do you use whole grain products? Often _____ Sometimes _____ Never _____

Do you eat meat? Yes _____ No _____ If yes, how many times per week do you use:

Ground beef _____

Other red meats (pork (including bacon), beef, lamb) _____

Chicken _____

Fish _____

Do you ever have meatless meals? Yes _____ No _____ Number/week _____

Do you use animal or vegetable protein sources? _____

If you do not eat meat, what is your protein source? _____

What kinds of fat do you use? _____

_____

Do you use sugar, honey, brown sugar? Yes _____ No _____ If yes, how many teaspoons of each do you use in a day? _____

Do you drink coffee? Yes _____ No _____ Cups/day _____ What do you put in your coffee? _____

What do you normally drink at meals? _____

What do you normally snack on? _____

Do you ever eat:

	Yes	Daily	Weekly	Occasionally	No
Pretzels	_____	_____	_____	_____	_____
Chips	_____	_____	_____	_____	_____
Snack crackers	_____	_____	_____	_____	_____

FANTASTIC LIFESTYLE ASSESSMENT

INSTRUCTIONS:

FOR EACH ITEM, PLACE AN X BESIDE THE BOX WHICH BEST DESCRIBES YOUR BEHAVIOR OR CONDITION IN THE PAST MONTH

FAMILY FRIENDS	MY COMMUNICATION WITH OTHERS IS OPEN, HONEST AND CLEAR	ALMOST ALWAYS ☐	FAIRLY OFTEN ☐	SOME OF THE TIME ☐	SELDOM ☐	ALMOST NEVER ☐
	I GIVE AND RECEIVE AFFECTION	ALMOST ALWAYS ☐	FAIRLY OFTEN ☐	SOME OF THE TIME ☐	SELDOM ☐	ALMOST NEVER ☐
	I GET THE EMOTIONAL SUPPORT THAT I NEED	ALMOST ALWAYS ☐	FAIRLY OFTEN ☐	SOME OF THE TIME ☐	SELDOM ☐	ALMOST NEVER ☐
ACTIVITY	ACTIVE EXERCISE-30 MINUTES EG. RUNNING, CYCLING, FAST WALK	MORE THAN 4 TIMES/WEEK ☐	3 TIMES/WEEK ☐	2 TIMES/WEEK ☐	SELDOM ☐	NEVER ☐
	RELAXATION AND ENJOYMENT OF LEISURE TIME	ALMOST DAILY ☐	3-5 TIMES PER WEEK ☐	1-2 TIMES PER WEEK ☐	LESS THAN ONCE/WEEK ☐	ALMOST NEVER ☐
NUTRITION	BALANCED MEALS	ALMOST ALWAYS ☐	FAIRLY OFTEN ☐	SOME OF THE TIME ☐	SELDOM ☐	ALMOST NEVER ☐
	BREAKFAST DAILY	ALMOST ALWAYS ☐	FAIRLY OFTEN ☐	SOME OF THE TIME ☐	SELDOM ☐	ALMOST NEVER ☐
	EXCESS SUGAR, SALT, ANIMAL FATS, OR JUNK FOODS	HARDLY EVER ☐	SELDOM ☐	SOME OF THE TIME ☐	FAIRLY OFTEN ☐	ALMOST DAILY ☐
	IDEAL WEIGHT	WITHIN 5 LBS (2KG) ☐	WITHIN 10 LBS (4KG) ☐	WITHIN 15 LBS (6KG) ☐	WITHIN 20 LBS (8KG) ☐	NOT WITHIN 20 LBS ☐
TOBACCO TOXINS.	TOBACCO USE	NONE IN THE PAST 5 YEARS ☐	NONE IN THE PAST YEAR ☐	NONE IN THE PAST 6 MONTHS ☐	1 - 10 TIMES/WEEK ☐	MORE THAN 10 TIMES/WEEK ☐
	ABUSE OF DRUGS: PRESCRIBED AND UNPRESCRIBED	HARDLY EVER ☐	SELDOM ☐	SOME OF THE TIME ☐	FAIRLY OFTEN ☐	ALMOST DAILY ☐
	COFFEE, TEA, COLA	NEVER ☐	1-2 DAILY ☐	3-6 DAILY ☐	7-10 DAILY ☐	MORE THAN 10 DAILY ☐
ALCOHOL	AVERAGE INTAKE PER WEEK	0 - 7 DRINKS ☐	8 - 10 DRINKS ☐	11 - 13 DRINKS ☐	14 - 15 DRINKS ☐	MORE THAN 15 DRINKS ☐
	ALCOHOL AND DRIVING	NEVER ☐	ALMOST NEVER ☐	ONLY OCCASIONAL ☐	ONCE A MONTH ☐	OFTEN ☐
SLEEP SEATBELTS STRESS	7-9 HOURS SLEEP PER NIGHT	ALMOST ALWAYS ☐	FAIRLY OFTEN ☐	SOME OF THE TIME ☐	SELDOM ☐	ALMOST NEVER ☐
	FREQUENCY OF SEAT BELT USE	ALWAYS ☐	MOST OF THE TIME ☐	SOME OF THE TIME ☐	SELDOM ☐	NEVER ☐
	MAJOR STRESSFUL EVENTS IN PAST YEAR	NONE ☐	1 ☐	2 - 3 ☐	4 - 5 ☐	MORE THAN 5 ☐
TYPE OF PERSON-ALITY	SENSE OF TIME URGENCY; IMPATIENCE	ALMOST NEVER ☐	SELDOM ☐	SOME OF THE TIME ☐	FAIRLY OFTEN ☐	ALMOST ALWAYS ☐
	COMPETITIVE AND AGGRESSIVE	ALMOST NEVER ☐	SELDOM ☐	SOME OF THE TIME ☐	FAIRLY OFTEN ☐	ALMOST ALWAYS ☐
	FEELINGS OF ANGER & HOSTILITY	ALMOST NEVER ☐	SELDOM ☐	SOME OF THE TIME ☐	FAIRLY OFTEN ☐	ALMOST ALWAYS ☐
INSIGHT	POSITIVE THINKER	ALMOST ALWAYS ☐	FAIRLY OFTEN ☐	SOME OF THE TIME ☐	SELDOM ☐	NEVER ☐
	ANXIETY, WORRY	ALMOST NEVER ☐	SELDOM ☐	SOME OF THE TIME ☐	FAIRLY OFTEN ☐	ALMOST ALWAYS ☐
	DEPRESSION	HARDLY EVER ☐	SELDOM ☐	SOME OF THE TIME ☐	FAIRLY OFTEN ☐	ALMOST ALWAYS ☐
CAREER (includes home-making, students, etc.)	SATISFIED IN JOB OR ROLE	ALMOST ALWAYS ☐	FAIRLY OFTEN ☐	SOME OF THE TIME ☐	SELDOM ☐	ALMOST NEVER ☐
	GOOD RELATIONSHIPS WITH THOSE AROUND	ALMOST ALWAYS ☐	FAIRLY OFTEN ☐	SOME OF THE TIME ☐	SELDOM ☐	ALMOST NEVER ☐

STEP 1 TOTAL THE X'S IN EACH COLUMN	1.	☐	☐	☐	☐	☐
STEP 2 MULTIPLY TOTALS BY THE NUMBERS INDICATED	2.	X4 ____	X3 ____	X2 ____	X1 ____	
STEP 3 ADD YOUR SCORES ACROSS THE BOTTOM FOR YOUR GRAND TOTAL	3.	____ +	____ +	____ +	____ =	☐ % GRAND TOTAL

THANK YOU FOR COMPLETING THE FANTASTIC LIFESTYLE ASSESSMENT

PLEASE ASSIST US BY PROVIDING THE FOLLOWING INFORMATION: SEX M ☐ F ☐

OCCUPATION ____________ YEAR OF BIRTH ________ NAME(OPTIONAL) ____________________

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APPENDIX D

OPTIONAL METHODS FOR PRIORITY SETTING

APPENDIX D - EXAMPLES OF FOUR PRIORITY SETTING METHODOLOGIES

This appendix outlines four potential methods for determining health promotion priorities in your community or district. The four methods are not intended to be exhaustive, but rather represent a range of techniques likely to be of use to Health Councils. These methods have been field-tested, primarily in the United States, and found useful for the purposes of priority setting. The four methods, which range from the simple to the sophisticated are the: Simplex, Nominal Group Planning, Criteria Weighting, and Hanlon (Young, 1978). These methods are designed so they can be used individually or blended to accommodate an agency's particular needs.

A general description of each method follows. For each technique, a detailed step-by-step example is also provided.

Example 1. Simplex Method

In the Simplex method, members of a decision-making group are asked to respond to questionnaires citing problems and their ramifications as well as the effect of proposed solutions. This method can help a decision making group work more effectively by providing it with structured questions to analyze each opportunity, problem, or program option before them. The answers they arrive at for these questions are scored and the results totalled. Top priority is given to the opportunity, problem or proposal with the highest number and the others follow in order. A variety of data can be employed in conjunction with this method.

The Simplex method uses "questions" for considering problems and solutions. Category areas for these questions might include: 1) questions concerning impact on the community's health; 2) questions concerning issues of more general social concern; 3) questions of a health planning nature; and, 4) questions concerned with political factors. (Refer to Exhibits 1 to 7 at the end of this Appendix for illustrations of these sets of questions.) Each set of questions may be expanded or modified to suit the needs of the local planning body. If the planning group is faced with a decision about which of several health promotion program options should be chosen to deal with an identified problem, the group would answer the sample questions bearing on the selection of "proposed solutions". If the group needs to more clearly identify the problem, then the questions on "proposed problems being considered" will be of use.

Steps of the Simplex Method

This method can be used to rank order either problems or solutions. Illustrations of these sets of questions are presented in Exhibits 1 - 7 at the end of this Appendix.

Step 1: Develop a Simplex Questionnaire

The sample questions can be used as a guide in questionnaire development. The questions must be tailored to suit the particular needs of the local area as perceived by the Health Council. The unique conditions of a situation may dictate that certain sample questions be modified or deleted, while new questions may need to be formulated to address concerns not adequately covered. The list of questions should be agreed upon by the group prior to the planning exercise. Consensus is preferred although approval votes requiring two-thirds or greater majority may hasten the process. The decision-making method should be determined in advance.

The actual questionnaire can vary in complexity and length according to group desires. As the number and complexity of questions increases, the possibility increases that the responses to them will overlap and bias the final weightings. Planners should carefully scrutinize their list of questions to ensure that they measure only what it is intended and that they do not overlap with each other. This is a difficult task, but should not be ignored - it will increase the validity of the measures.

Step 2: Familiarization with Proposal Background Information

Prior to completing the evaluation questionnaire, group members should receive and review in advance, all program options and all other information available to them concerning the intent, scope, probable effectiveness, and overall value of each proposal.

Step 3: Complete the Simplex Questionnaire

The Simplex questionnaire on the options which are being considered is completed by each group member independently.

Step 4: Tabulation of "Solution Questionnaire" Results

The tabulation process consists of averaging the numbers that correspond with each selected answer by each member of the group. The multiple choice questions should be arranged in such an order that the higher the number (1 - 5) the better the program option under that criterion. Accordingly, when all the members' answers for one question are totalled and averaged, the resulting figure represents the group's assessment of the program option. This assessment can then be numerically compared with the group's assessment of the other options.

The next step is to total averages for all the questions. The resulting total for each program option can then be compared with the others. The one with the highest number would then be considered the most desirable or the highest priority.

Step 5: Evaluation of "Problem Questionnaire" Results

The questionnaire results can be evaluated in several ways. The simplest way is to compare the score for other program options which were identified by the group to arrive at a rank ordering of options in terms of desirability. Or, the group might establish an arbitrary cut-off score (for example, 60,) below which options can be rejected. Alternatively, it might establish "ranges" which indicate the option's desirability. The method chosen, however, will always be somewhat arbitrary. The most important consideration should be that it is adapted to the needs and abilities of the members of the group.

Optional Weighting Techniques

Each of the questions in both questionnaires is implicitly accorded equal weight. However, in many areas the importance of each question may vary. "Numbers of people affected" may, for example, be viewed as much more important than "return for dollars spent". If the group believes the various questions should be weighted to express relative importance, weighting can be accomplished in several ways. One of the easiest is to assign each question a value expressing its comparative importance. This expression of "relative importance" can be determined through a polling process. Each member assigns a value to each question, (within a specified numerical range, e.g., 1 to 3), and the results are averaged. The average score for a given question is employed as that question's weight.

Weighting involves additional time but may result in a more refined ranking process. Weighting may not be always necessary, but where the group believes certain criteria are more relevant or should be given additional importance relative to other criteria, then the weighting factor should be considered. Again, the complexity of weighting techniques should match the task at hand and the interest of group members. (See also the Criteria Weighting Method).

Example 2. Nominal Group Planning Model

The Nominal Group Planning Model was developed by Delbecq and Van de Ven (1972). This model can be used for priority setting, problem and knowledge exploration, and program development and evaluation. The mechanics of the process are essentially the same in each application. A variety of data can be employed in conjunction with the method. It is essentially a process of organizing collective opinions and values in a systematic way to assist with decision-making.

The major premise of the nominal process is that the decision-making body is made up of people with diverse backgrounds, expertise, and perceptions. Hence, the successful completion of a planning process involves assimilating the diverse inputs of the participants into a decision consensus. Of the several priority setting methods available, this one involves fewer mathematical procedures and a greater degree of group discussion and information exchange. Its key phase is information exchange.

The Steps of the Nominal Group Planning Model

Step 1: Set Up the Structure of the Decision-Making Group

Two questions must be resolved at this point: 1) how large should the group be; and, 2) should the group be broken down into sub-groups? The second question may have less relevance to District Health Councils who are setting priorities amorg health promotion program options.

The major issue to address is the size of the group. The optimal group size for a nominal process is six to ten, although the size of the group can be larger. As the group size increases, the time requirements and the complexity of the process increase, it becomes more difficult to obtain a consensus decision. These difficulties are often worth accepting as they can result in a better quality decision. The particular organizational structure of the Health Council and its decision-making patterns should be considered to determine an optimal number and mix of people on your Nominal Group priority setting committee.

Step 2: Define the Main Divisions of the Decision Question

The co-ordinator explains how the process works and outlines the health promotion program options being considered. Each participant is given a preprinted "Nominal Group Statement Form" which includes an exploratory note concerning the matter about which the group is seeking a consensus. More than one form and question may be used in the course of achieving an overall consensus. Examples of these forms are shown in Exhibit 8 at the end of this Appendix.

Each group member will independently complete the Task Statement Form(s) within a time limit, drawing from their expert and personal knowledge, public opinion, and government regulations and policies.

At the end of the allotted time period, the co-ordinator uses a flip-chart to compile a master list of problems and criteria. In round-robin fashion, each member contributes one problem (criterion) aloud from his list to be recorded on the flip chart. At this point there is no discussion about the master list. One participant after another reads an item from his list until all the items from all the lists have been transferred to the master.

Step 3: Discussion of Decision Question

The co-ordinator leads the group through a discussion of the ideas to clarify, elaborate, defend or dispute items. New items may be added but no items may be eliminated at this point. A specific time limit can be set for this phase.

Step 4: Problem Evaluation

At this point each participant is asked to review and evaluate the list of program options in light of the list of criteria. The planning group can use a common set of criteria for the assessment of health promotion program options, or members can choose their own criteria. The latter option is clearly more subjective. By whatever procedure the evaluation is conducted, the result is that each member comes to a decision as to the importance of each of the programs listed.

Step 5: Rank Ordering of Problems

During this step each participant lists in rank order the ten most important options as determined in his evaluation. Each of the ten will be recorded on a separate index card by program option name and number. The option which is considered the most important should then receive a rank vote of ten, which will be marked on its index card. A nine will be marked for the second most important option, and so on. The relative importance of each option is shown by summing the participant votes for each option.

Step 6: Discuss Ranking

A discussion of results is encouraged so that participants will have ample opportunity to make their views known to the group. Members can query, elaborate, defend or dispute these preliminary results.

Step 7: Final Ranking

Participants are asked to review and, if they wish, change the ten priority items on their index cards in light of discussion in Step 6. Members rate their top priority with a value of 100 and assign values between 0 and 99 on the other nine cards in their sets to reflect relative differences in importance between items.

Individual ratings are again summed and the program option with the highest rating represents the group's consensus on the top priority.

Example 3. Criteria Weighting Method

This method involves a simple mathematical process by which a set of decision-making criteria is applied to a set of decision elements in order to develop a comparative value for each program option under consideration (Blum, 1974). The key to this approach is the development of "weighted" criteria against which program options are measured.

The four basic steps involved in this method are:

- assign weights to the criteria, which have been chosen as appropriate to the health care delivery system or health promotion in the area;
- rate each program option under consideration according to each criterion;
- multiply the weighting value by the rating to obtain the comparative significance level; and then,
- review and compare each alternative in light of its priority ordering according to significance level values.

The Steps in the Criteria Weighting Method

If the criteria have not been determined, the initial step would be to identify them.

Step 1: Preparation of Criteria

Criteria are grouped into topical categories as determined by the group, such as health status, high risk populations, preventable diseases, and so on. Under each of these categories the decision criteria agreed upon through group process techniques, or a simplified nominal group process, should be listed.

Step 2: Establishing the Relative Importance of the Criteria

The relative importance of each criterion is determined in two basic steps. First, the criteria are thoroughly discussed to ensure that all participants understand them and that the appropriateness and validity of each is agreed upon. Second, each member assigns a single value to each criterion (e.g., from one to five, with the more imporant criteria receiving the higher values). These values are then averaged. The single value for each criterion expresses its relative importance as viewed by the group.

Step 3: Rating Program Options by Criteria

Rating health promotion program options under consideration is achieved by a similar subjective process used to assign weights to the criteria. In this case, each member will privately review each option according to each criterion. The member's impression of the worth of a given option based on one of the criteria is expressed by scoring the problem between -10 and +10.

After all members have rated each option, their rating scores for each criterion are averaged. The results of this process are single numbers (+ or -) that reflect the consensus of the group on how important one option is based on one criterion. Each combination of one option and one criterion should have a number rating associated with it.

Step 4: Obtaining Criteria Significance Levels

For each criterion, the options rating (from Step 3) is multiplied by the criterion's weight. The product is a "significance level", which can be a positive or negative number.

Step 5: Summing and Standardizing Significance Levels

When a significance level has been compiled for each of the relevant criteria, they are summed. These totals are "standardized" by dividing them by the number of possible criteria listed for each option on which ratings can be made. The total is divided by the number of criteria actually used, since each option need be measured against all the possible criteria listed. The result is the average significance level for the option. The higher the significance level, the higher the priority. (See Exhibit 10).

Step 6: Compare and Set Priorities

All topical criteria significance levels are achieved as in Steps 4 and 5 for each option. For example, if there are four topical criteria and three options, there would be twelve cells (4 x 3) with average standardized significance levels. Each cell contains a numbered value reflecting the consensus of the decision making group as to the priority of the option based on that group of criteria. For each option the criteria group values are summed to produce the final valuation. The end result is a rank ordering of options. The consensus of the group is that option ranked highest should be addressed first.

Example 4. The Hanlon Method

The Halon Method has three objectives:

- to permit a decision making party to identify explicit major factors to be included in the priority setting exercise;
- to organize the factors into groups that are to be weighted relative to each other; and,
- to allow the factors to be modified as needed and stored individually (Hanlon, 1974).

Based on repeated trials conducted in various health planning contexts whereby problems were ranked or solutions selected based on numerous criteria, a consistent pattern became apparent. This pattern is reflected in the four components used in the Halon Method:

- component A = the size of the problem,
- component B = the seriousness of the problem,
- component C = estimated effectiveness of solution (solubility of the problem)
- component D = PEARL factors (to be explained).

The scores expressing these four components are then inserted into the following two formulas:

- Basic Priority Rating (BPR) = $(A + B) C$,
- Overall Priority Rating (OPR) = $(A + B) C \times D$.

As in the case of many evaluative procedures, a large amount of subjectivity enters into this process. The choice and definition of the factors in each component of the formulas and the relative weights assigned to them are based upon a group decision and are flexible.

This method differs from others in that a series of components are used in an explicit fashion as guideposts to which the priority setting group must attach perceptions of local circumstances. Group members must quantify their "perception" of each component and insert this value into the given formulas for priority rating.

Component A - Size of the Problem

Generally, the size of the problem means the percentage of the population directly affected by the problem or affected by the proposed option.

Component B - Seriousness of the Problem

For this component, the group develops a list of factors to be used to determine the seriousness of the problem being addressed. This list is probably best developed by a group process in which each member completes a list of factors that he believes to be pertinent to the problem. A composite list is developed from the individual lists and a vote is taken, or consensus achieved, to determine those factors which are most important in assessing the seriousness of the problem. The number of factors should be kept to a reasonable number that should probably not exceed ten. A list of such factors might include the following:

Urgency - public concern, public health concern;
Severity - disability, morbidity, and mortality rates; accessibility or distance to services; and,
Trends (forecasts) in health needs - potential number of persons who may acquire problem or be affected by the problem, and relative degree of involvement.

Having developed this list, each member individually indicates the seriousness of the problem by scoring each factor on a zero to ten scale, ten being most serious. For each criterion, an average of the members' score is determined. The average scores for all factors are summed, and an average value for component B is determined.

Each factor can also be weighted relative to each other using a deliberative group process (see Criteria Weighting Method as example).

Component C - Effectiveness of the Solution

Effectiveness of the solution is defined as the improvement of the services/programs offered in relation to current services as a result of the implementation, in this case, of the health promotion program option. In almost all cases the degree of improvement or the lack of it will be an estimate on the part of the group's collective expertise, and based on all information available to them.

This component will be scored within a range of .5 to 1.5. At the low end of the range, .5 signifies that the effect of the alternative implementation is not going to improve service levels to the currently desired level. On the other hand, 1.5 shows that service levels are expected to exceed desired levels upon implementation. A value of 1 indicates that services will be neither appreciably above nor below desired levels.

As in component B, each member will assign his estimated value for component C. The individual values will be tabulated to produce an average value. This value will be inserted in the formula.

Component D - PEARL

PEARL consists of a group of factors which are not directly related to actual need or effectiveness but which determine whether a particular opportunity or activity can be successfully carried out:

P = propriety
E = economic feasibility
A = acceptability
R = resource availability
L = legality.

Each of these qualifying factors is appraised and the result expressed as a value equal to zero or one. Since together they represent a product rather than a sum, if any of them is rated zero (i.e., improper, infeasible, unacceptable, or illegal), it not only gives PEARL a total rating of zero but also makes the OPR score zero. Therefore, although the BPR score might be high, the proposed activity or program option is impossible or impractical at the moment. Certain intermediate steps are needed.

To adapt this formula to suit the needs of the local Health Council, a group could add, delete or change factors. At the minimum, the group should decide whether the proposed health promotion program option has a reasonable probability of being implemented.

The Steps of the Hanlon Method

Let us consider a hypothetical situation. A Health Council which wants to decrease the incidence of heart-related diseases in its district and must decide whether to use available resources on one of two program options: a mass media campaign or a fitness program. It is therefore necessary to determine which is the higher priority.

Step 1: Determine Component A - Size of Problem

The group must decide which factors will be used to determine the size of the problem. The group may decide to use morbidity, mortality and wellness figures as related to heart disease, percent of total population directly affected by the problem, and potential years of life lost to heart disease.

Tables are developed which break down each factor into an appropriate number of levels, which range from high to low, e.g., mortality rates significantly lower than the Ontario average receive a 10; rates which approximate the provincial average rate a 5; and rates significantly higher than the Ontario average get a 1 (with a range of graduations as required).

The group must estimate the actual values of each factor for each of the two program options under consideration. For both, the factor scores are averaged to produce the value of component A.

Step 2: Determine Component B - Seriousness

This set of factors is highly subjective and therefore less quantifiable than component A factors. The group must choose a certain number of factors to be scored as to their seriousness. Group discussion or "brainstorming" should accomplish this list in short order. Each member then scores each factor on a scale from zero to ten, where ten is the most serious. Individual scores for each factor are averaged and inserted in the formula as component B.

Step 3: Determine Component C - Solubility

The group must then estimate the effectiveness with which the problem can be addressed. The question is: Can current resources and technology do anything about this problem? Each member ranks the problem between .5 and 1.5 according to his estimate of the problems solubility in practical terms (.5 suggests to problems not likely to be solved and 1.5 suggests a problem is well within current capabilities).

Step 4: Appraise PEARL

PEARL, representing propriety, economic feasibility, acceptability, resource availability, and legality, is a determination of whether a particular program option can actually be carried out. The question to be addressed is: Do any of the factors of PEARL preclude pursuing solutions to the problem? Each member votes "yes" (value of 1) or "no" (Value of 0). The votes are tabulated and should be discussed by the group. The group must decide whether the PEARL rating is a 1 (feasible) or 0 (not feasible). The value of 1 or 0 forms the component D value of the formula such that a 0 score eliminates the program options from further consideration.

Step 5: Compute BPR

Compute BPR with the formula $BPR = (A + B) C$.

Step 6: Compute OPR

Compute OPR with the formula $OPR = (A + B) C \times D$

Step 7: Evaluate Other Factors

The resulting priority ranking of the program options should be reviewed in light of non-quantifiable factors such as political acceptability. The group should use the final step as an opportunity to refine the ranking in light of such other factors.

REFERENCES

1. Young, A. Methods for Setting Priorities in Area-Wide Health Care Planning. U.S. Department of Health, Education and Welfare, April 1978.

2. Delbecq, A., Van de Ven, A. The Nominal Group as a Research Instrument for Exploratory Health Studies. American Journal of Public Health. 1972, 62, p. 337.

3. Blum, H. Planning for Health: Development and Application of Social Change Theory. Human Sciences Press, 1974, Chapter 6.

4. Hanlon, J. Administration of Public Health. C. U. Mosby Co., 1974, pp. 234-287.

Source: Exhibits 1 through 7 are from Arthur Young and Company, Methods for Priority Setting in Area-Wide Health Planning. Washington, D.C.: U.S., Department of Health, Education and Walfare, April 1978.

EXHIBIT 1 PROBLEMS BEING CONSIDERED: COMMUNITY HEALTH QUESTIONS

1.	This problem affects:	1.	very few people
		2.	a minority of them
		3.	half the people
		4.	a majority
		5.	everyone
2.	This problem's effect on the community health environment is:	1.	negligible
		2.	very slight
		3.	moderate
		4.	significant
		5.	very detrimental
3.	In the next ten years, this problem is going to:	1.	get much better
		2.	get better
		3.	stay the same
		4.	get worse
		5.	get much worse
4.	Left unattended, this problem:	1.	will go away
		2.	is likely to go away
		3.	will stay the same
		4.	is unlikely to go away
		5.	will not go away
5.	The number of premature deaths (those deaths caused before the end of the normal life span) caused by this problem is:	1.	none
		2.	few
		3.	some
		4.	many
		5.	very many
6.	The pain, discomfort, and/or inconvenience caused by this problem is:	1.	none
		2.	little
		3.	appreciable
		4.	serious
		5.	very serious
7.	The amount of distress or danger to others caused by this problem is:	1.	none
		2.	little
		3.	appreciable
		4.	serious
		5.	very serious
8.	The extent of disability caused by this problem is:	1.	negligible
		2.	mild
		3.	appreciable
		4.	serious
		5.	total

EXHIBIT 2 PROBLEMS BEING CONSIDERED: GENERAL SOCIAL CONCERNS

1. If unattended, this problem lasts for:
    1. days
    2. weeks
    3. months
    4. years
    5. life

2. Public interest in this problem is:
    1. very low
    2. low
    3. average
    4. high
    5. very high

3. Public dissatisfaction with this problem is:
    1. very low
    2. low
    3. average
    4. high
    5. very high

4. Public attitude toward groups affected by this problem is:
    1. antagonistic
    2. disapproving
    3. indifferent
    4. sympathetic
    5. deeply concerned

5. The estimated amount of lost work time caused by this problem is:
    1. none
    2. little
    3. appreciable
    4. serious
    5. very serious

6. The extent to which racial or other segregation is involved in this problem is:
    1. none
    2. slight
    3. noticeable
    4. significant
    5. great

EXHIBIT 3 PROBLEMS BEING CONSIDERED: HEALTH PLANNING CONCERNS

1. The attitude of local political bodies toward efforts to solve this problem is:	1. antagonistic 2. indifferent 3. complacent 4. interested 5. very interested
2. Trained health care manpower available to cope with this problem is:	1. extremely short 2. less than adequate 3. sufficient 4. abundant 5. overabundant
3. Of the health care manpower, facilities and money currently available, this problem consumes:	1. much less than its share 2. less than its share 3. its share 4. more than its share 5. much more than its share
4. In attempting to deal with this problem, the HSA has for its considerations:	1. no proposals or programs which might help solve it 2. one or more rough ideas concerning possible solutions 3. one or more preliminary draft proposals or program ideas concerning possible solutions 4. one or more final proposals or recently initiated programs that seek to solve the problem 5. one or more existing programs aimed at solving the problem
5. For this problem, present technology can:	1. do nothing 2. do little 3. control it 4. improve it 5. eliminate it

EXHIBIT 4 SOLUTIONS BEING CONSIDERED: QUESTIONS ON COMMUNITY HEALTH

1.	This solution will benefit:	1. 2. 3. 4. 5.	few people some people half the people a majority everyone
2.	This solution would make manpower, facilities, and money available to:	1. 2. 3. 4. 5.	very few minority half the people majority everyone
3.	The effect of this solution on premature deaths (those deaths before the end of the normal life span) will be:	1. 2. 3. 4. 5.	none slight reduction reduction great reduction elimination
4.	This solution's effect on the community health environment will be:	1. 2. 3. 4. 5.	very harmful harmful without effect improvement great improvement
5.	This solution will probably solve the problem:	1. 2. 3. 4. 5.	never eventually in good time soon immediately
6.	The effect of this solution on pain, discomfort, and/or inconvenience will be:	1. 2. 3. 4. 5.	an increase no change moderate reduction substantial reduction great reduction

EXHIBIT 5 SOLUTIONS BEING CONSIDERED: QUESTIONS ON GENERAL SOCIAL CONCERNS

1.	The effect on lost work time by this solution will be:	1.	an increase
		2.	no effect
		3.	a reduction
		4.	a great reduction
		5.	elimination
2.	The distress or danger to others caused by this solution will be:	1.	increased
		2.	not affected
		3.	moderate
		4.	reduced
		5.	eliminated
3.	This solution will:	1.	create many other problems
		2.	create few other problems
		3.	create no other problems
		4.	solve a few other problems
		5.	solve many other problems
4.	This solution's impact on a patient's employability will be:	1.	a substantial reduction
		2.	a moderate reduction
		3.	no change
		4.	a moderate increase
		5.	a substantial increase
5.	The aesthetic effect of this solution will be:	1.	bad
		2.	poor
		3.	fair
		4.	good
		5.	excellent
6.	Public attitudes toward this solution are:	1.	antagonistic
		2.	disapproving
		3.	tolerant
		4.	sympathetic
		5.	whole-hearted support
7.	Public opinion toward financing this solution will be:	1.	antagonistic
		2.	negative
		3.	indifferent
		4.	favorable
		5.	highly favorable

EXHIBIT 6 SOLUTIONS BEING CONSIDERED: QUESTIONS ON HEALTH PLANNING CONCERNS

1.	In practice this solution would be:	1. difficult to change 2. inflexible 3. somewhat rigid 4. fairly easy to change 5. highly flexible
2.	This solution will benefit:	1. few at high costs 2. few at moderate costs 3. many at moderate costs 4. majority at low costs 5. everyone at low costs
3.	The return for the dollar spent on this solution will be:	1. a losing proposition 2. break-even 3. moderate 4. substantial 5. very high
4.	This solution's effect on manpower requirements will be:	1. a great increase 2. an increase 3. no effect 4. a reduction 5. a substantial reduction
5.	The phases of the problem attacked by this solution will be:	1. one 2. few 3. many 4. a majority 5. all
6.	The amount of beneficial side effects produced by this solution will be:	1. none 2. few 3. some 4. many 5. very many
7.	The amount of health care manpower, facilities, and money used by this solution will be:	1. unacceptable 2. excessive 3. acceptable 4. minimal 5. negligible
8.	Necessary technology for this solution is:	1. unavailable 2. difficult to find 3. accessible 4. largely available 5. completely available

9.	There are many other solutions to this problem	1
	There are several solututions to this problem	2
	There are a few other solutions to this problem	3
	There is another solution to this problem	4
	This is the only solution to this problem	5

EXHIBIT 7 SOLUTIONS BEING CONSIDERED: QUESTIONS ON POLITICAL FACTORS

1. The political attitude toward this solution is:
    1. antagonistic
    2. indifferent
    3. complacent
    4. concerned
    5. very interested
2. This solution will affect public opinion toward health planning:
    1. very adversely
    2. adversely
    3. not at all
    4. favorably
    5. very favorably
3. Because of this solution, co-ordination among official agencies will be:
    1. greatly discouraged
    2. slightly discouraged
    3. unaffected
    4. slightly encouraged
    5. greatly encouraged
4. Because of this solution, co-ordination among public and private agencies will be:
    1. greatly discouraged
    2. slightly discouraged
    3. unaffected
    4. slightly encouraged
    5. greatly encouraged
5. Community participation and support in this solution will be:
    1. negligible
    2. slight
    3. moderate
    4. high
    5. very high

Source: Exhibits 1 through 7 are from Arthur Young and Company, *Methods for Priority Setting in Area-Wide Health Planning*. Washington, D.C.: U.S., Department of Health, Education and Welfare, April 1978.

EXHIBIT 8 EXAMPLE TASK STATEMENT FORMS

NOMINAL GROUP TASK STATEMENT FORM I

To identify those health care problems that should receive priority with regard to the allocation of effort and resources.

List the criteria by which you would judge the seriousness of a problem affecting the area's health care delivery system.

1.
2.
3.
4.
.
.
.
.
N

NOMINAL GROUP TASK STATEMENT FORM II

To identify those health care problems that should receive priority with regard to the allocation of effort and resources.

List all the problems whether subjective or objective, which you perceive as effecting the delivery of health care in your area.

1.
2.
3.
4.
.
.
.
.
N

Source: Exhibit 8 is from Arthur Young and Company, Methods for Priority Setting in Area Wide Health Planning. Washington, D.C.: U.S., Department of Health, Education and Welfare, April 1978.

EXHIBIT 10 DETERMINING SIGNIFICANCE LEVELS FOR EXAMPLE COMMUNITY HEALTH ISSUES CRITERIA

	1 Example Weights	2 Average Rating			3 Significance Level		
Example Criteria		A	B	C	A	B	C
Accessibility to Health Services	5	2	3	1	10	15	5
Health Manpower Requirements	4	4	3	2	16	12	8
Public Education About Topic	2	-1	0	-2	-2	0	-4
Probable Duration if left Unattended	2	3	3	1	6	6	2
Mortality Impact	2	2	1	3	4	2	6
Morbidity Impact	2	-1	-4	-	-2	-8	-
Prevalence of Attack Rate	3	-3	-3	-2	-9	-9	-6
Total Health Planning Significant Levels					23	18	11
Divided by the number of criteria applied to each problem					7	7	6
Average Standardized Significance Level					3.29	2.57	1.83

Note: The criteria and weights used are merely examples and are not intended in any way to represent any particular real-life situation. They are solely for the purpose of presenting how the criteria weighting method operates.

Source: Exhibit 10 is from Arthur Young and Company, Methods for Priority Setting in Area-Wide Health Planning. Washington, D.C.: U.S. Department of Health, Education and Welfare, April 1978.